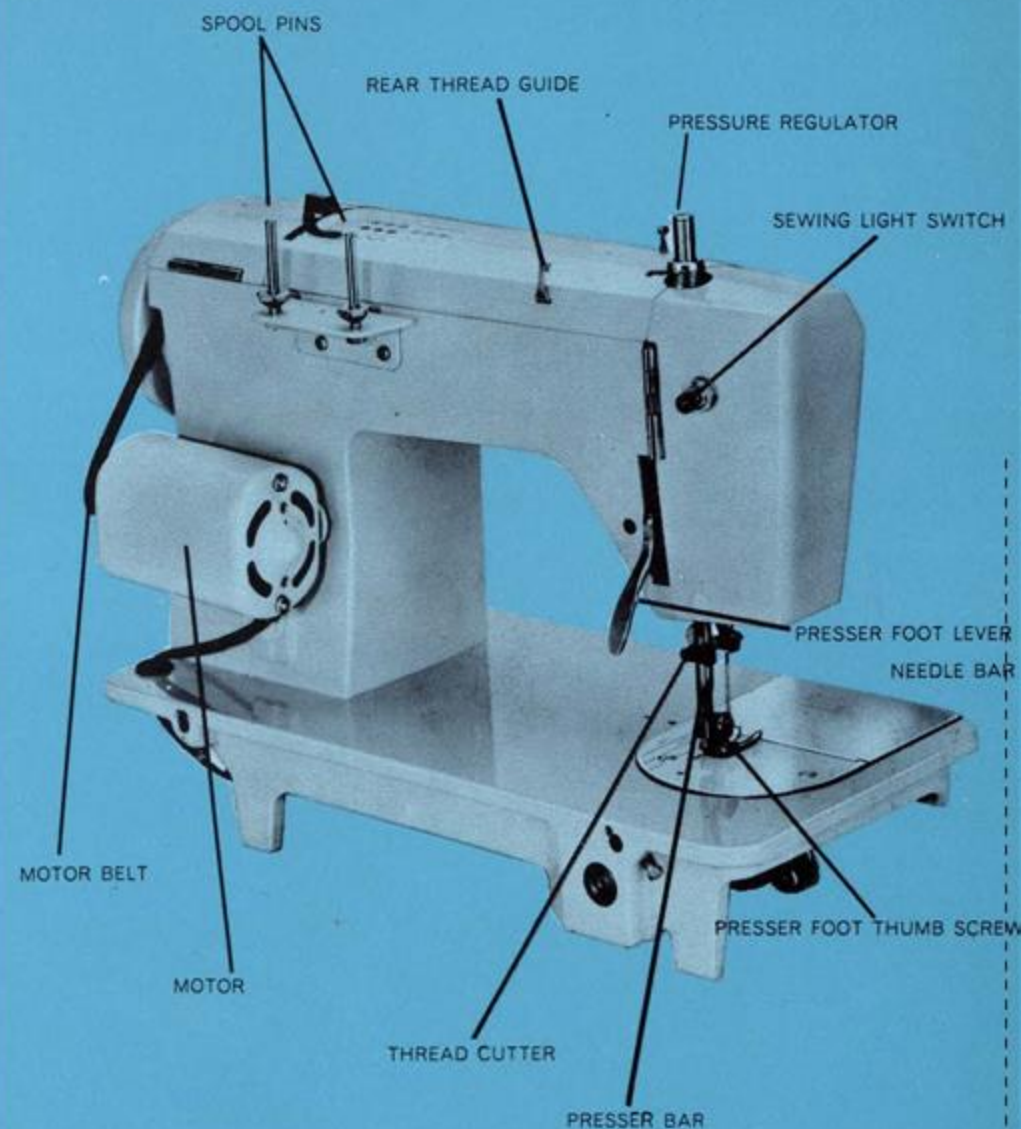
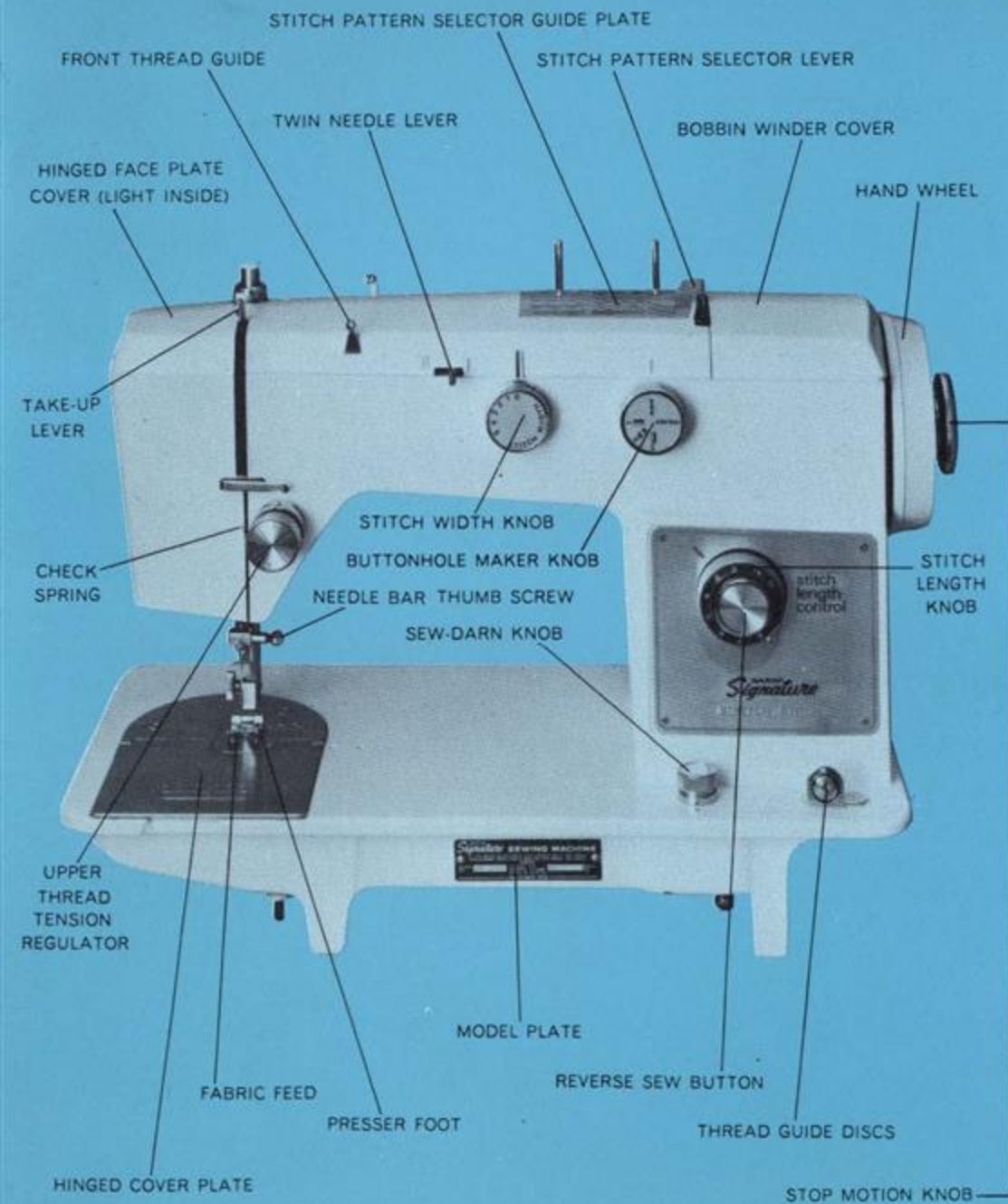




 *Signature*

ZIGZAG SEWING MACHINE ... *Yours to make sewing easier*



THIS SIGNATURE SEWING MACHINE COMES TO YOU IN TWO CARTONS—
one containing the sewing head and box of accessories,
and the other the cabinet or carrying case.

This machine is constructed of the highest quality materials and was tested at the factory before shipment to make sure it sewed perfectly. When you have assembled it according to the instructions for your model, read through this book carefully. Follow the steps to the point where the machine is ready for sewing. Then practice sewing back and forth over a scrap of material to acquire the "feel" of handling the machine.

If at any time it appears that the machine is not operating properly, stop sewing and review the instructions carefully again. You will be repaid many times with satisfaction and pleasure in its performance for the time you spend learning about your machine.

your new Signature zigzag sewing machine is more

than a practical homemaking aid. In addition to doing your mending, it provides a challenge to your ingenuity and the means of expressing your personality in clothing, home decorations and accessories—and saves you money besides!

There are many carefully detailed "How-To" instructions available to both the professional and amateur to help you be your own designer and decorator. With today's wonderful fabrics in lovely colors and patterns, modern sewing aids and notions, you can create a custom wardrobe or home decorating scheme that is unique and appealing.

The vast selection of coordinated fabrics and trimmings available make it more exciting and easier than ever for you to highlight your home with expensive-looking window treatments, bedspreads, slip covers, tablecloths, toss pillows and even window shades—all for a fraction

of the ready-made cost. Emphasize simplicity or elegance, as you wish, and give a dramatic touch to every room in the house.

It is possible to fashion children's clothes which combine practicality and whimsy when you make them yourself. You can give designer touches to ready-made garments, and out-of-fashion clothing takes on a new look with simple restyling or the addition of some new decorative trim.

If possible, set up your new sewing machine where it will be easily accessible and ready to use. Then, whenever the necessity arises, or you have the urge to be creative, it will be ready to serve you.

Yours to make sewing easier
MONTGOMERY WARD

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ASSEMBLING THE MACHINE

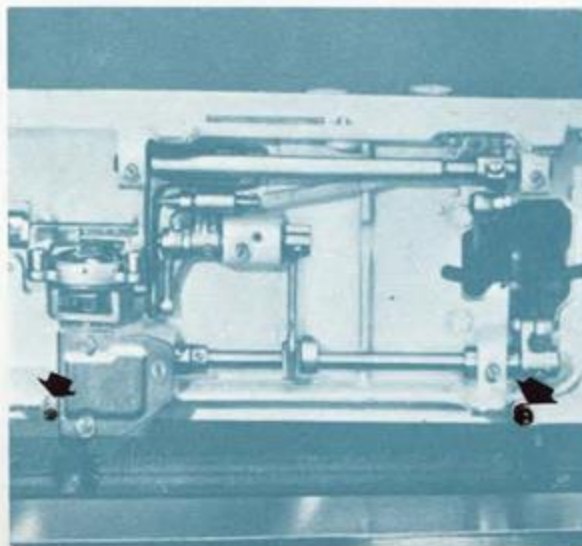
cabinet model

Remove sewing machine head and cabinet from their shipping containers, and stand the cabinet upright. Open lid and hinged cut-out of table top.

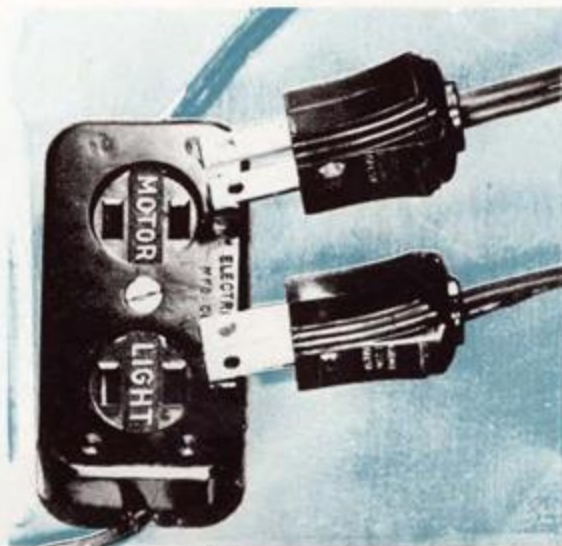
The head attaches to cabinet by means of two hinged pins in cabinet and two bushings with locking screws in the head which were installed at factory. Loosen locking screws in bushings, but do not completely remove them.



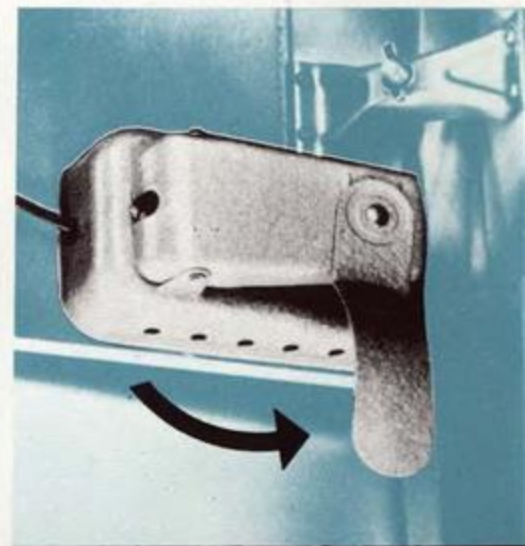
1. Position sewing head over cabinet, and fit bushing onto pins. Make sure they slide all the way down.



2. Tilt sewing head back and tighten locking screws.



3. Plug motor cord in socket labeled "Motor," and light cord in socket labeled "Light." Lower cut-out table top and allow head to come forward.

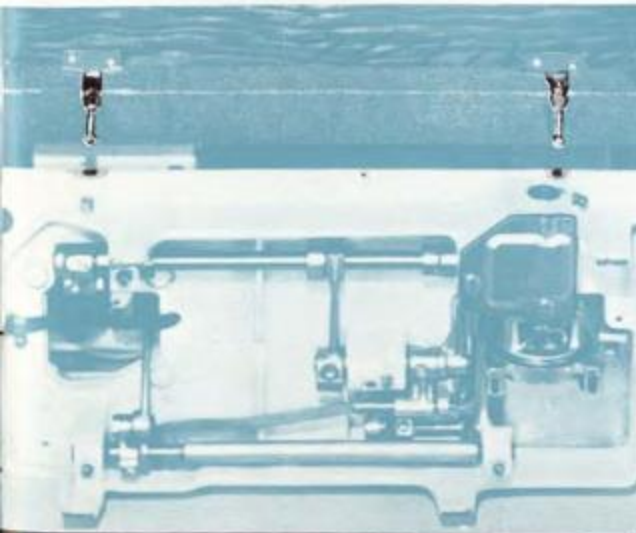


4. When you are ready to sew, pull down knee lever starter and insert plug in an electrical outlet.

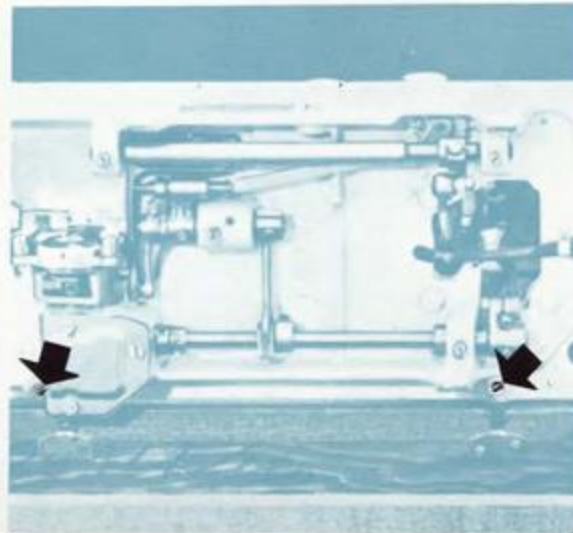
carrying case model

Remove sewing machine head and carrying case from their shipping containers. Remove cover from case.

The head attaches to the case by means of two hinged pins in the base and two bushings with locking screws in the head which were installed at factory. Loosen locking screw in bushings, but do not completely remove them.



1. Lay machine head, face down, on a table or other solid flat surface.



2. Position base over the head, and fit pins into the bushings. Make sure they slide in all the way. Tighten locking screws securely with a screwdriver.



3. Stand upright on base, face forward, motor and light cords extending out through slot provided for them in base of case. Plug motor cord into socket from foot pedal labeled "Motor," light cord into "Light" socket.



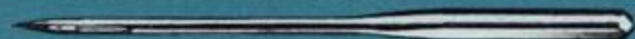
4. When you are ready to sew, set Starter Foot Pedal on the floor and plug into an electrical outlet.

SELECTING NEEDLE & THREAD

Best results can be obtained only when you use the correct needle and thread for the material being sewn. Lightweight fabrics require a thin needle and fine thread; heavier materials, a thicker needle and coarser thread. Too thick a needle can cause skipped stitches on delicate fabrics; too thin a needle may bend or break on heavy fabrics. Never use a needle that is bent, or blunt at the point.

There should be a similarity between the fiber of the fabric and the fiber of the thread. This is important because the thread should react as the fabric does to repeated dry cleanings or washings, bleaches, and a hot iron.

- Sew cotton and linen with **MERCERIZED COTTON**.
- Most man-made synthetics—nylons, orlons, dacrons, fiberglass, etc.—serve best when sewn with synthetic fiber thread—**NYLON**.
- Sew silk and woolen fabrics with **SILK** thread.
- Sew blends with the type of thread that corresponds most closely to the predominant fiber in the material.



*Correct needle length is 1- $\frac{1}{2}$ ".
The exact length is etched on the needle plate.*

NEEDLE AND THREAD SIZES

The chart shows size and type of thread, and needle size, for various weights and kinds of fabrics. Size means the fineness or thickness of both needle and thread. Use same size thread for needle and bobbin.

This machine uses needles identified as AA. Order Wards Article No. 82-9270 and specify the size wanted, or assortment.

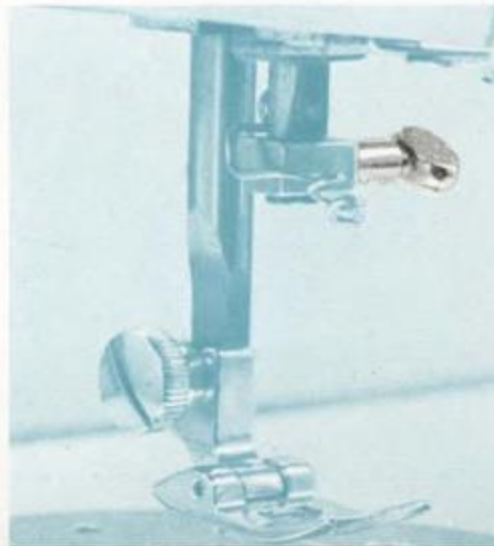
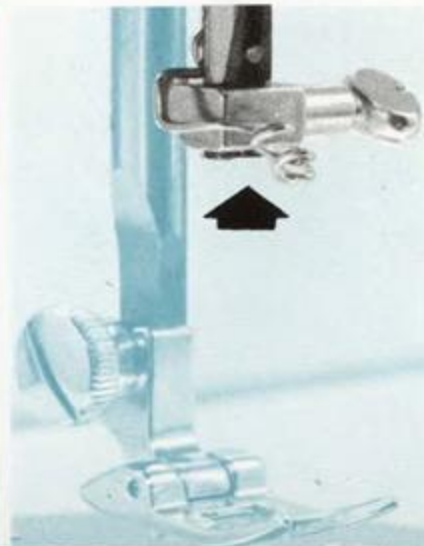
FABRICS	THREAD SIZE	NEEDLE SIZE
VERY DELICATE: Chiffon, tulle, very fine tricot, organza, sheer lace and net	100-150 Cotton Fine Mercerized Synthetic	0
LIGHTWEIGHT: Cotton organdy, silk and synthetic fiber jerseys, voile, plastic film, sheer curtains	80-100 Cotton 50 Mercerized A Silk Synthetic	B
MEDIUM WEIGHT: Percalé, chintz, faille, taffeta, lightweight woolens, medium weight cottons, dress weight silk, synthetic fiber crepes, fine corduroy and knits	60-80 Cotton 50 Mercerized A Silk Synthetic	$\frac{1}{2}$
MEDIUM HEAVY: Heavyweight cottons, medium weight suiting and coating, corduroy, velvet, suedecloth, short pile fabrics, vinyl apparel fabrics, drapery fabrics, lightweight upholstery, heavy knits	40-60 Cotton Heavy Duty Mercerized	1
HEAVY: Overcoating, denim & dungaree, canvas, heavy upholstery fabrics, heavy napped material	20-40 Cotton Heavy Duty Mercerized	2 or 3

SETTING THE NEEDLE

Select a needle of proper size for the material to be sewn.



1. Turn hand wheel toward you until the needle bar raises to its highest point.



2. Loosen thumb screw on needle clamp.



3. Place flat side of needle toward back of the machine, and insert in needle clamp as far as it will go; tighten thumb screw.



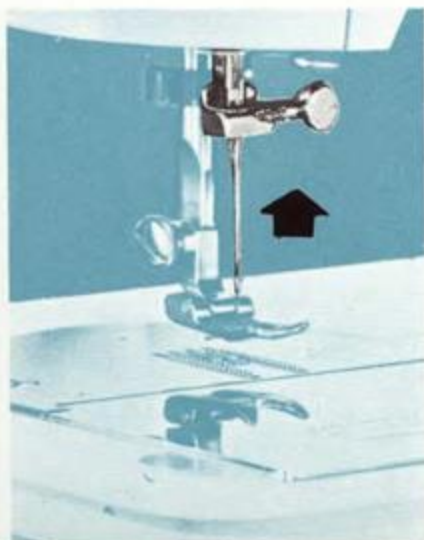
REMOVING BOBBIN CASE AND BOBBIN

In preparing your machine for sewing, it is necessary to wind a bobbin with thread, place it properly in bobbin case, and insert bobbin and case in shuttle body of machine.

This Signature Sewing Machine was shipped from factory with a bobbin and case in position as for sewing. To remove the bobbin for winding with thread:—



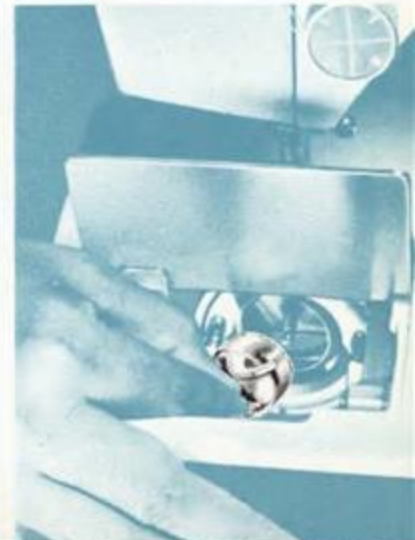
1. Turn hand wheel toward you until needle bar is at its highest position.



2. Raise hinged cover plate.



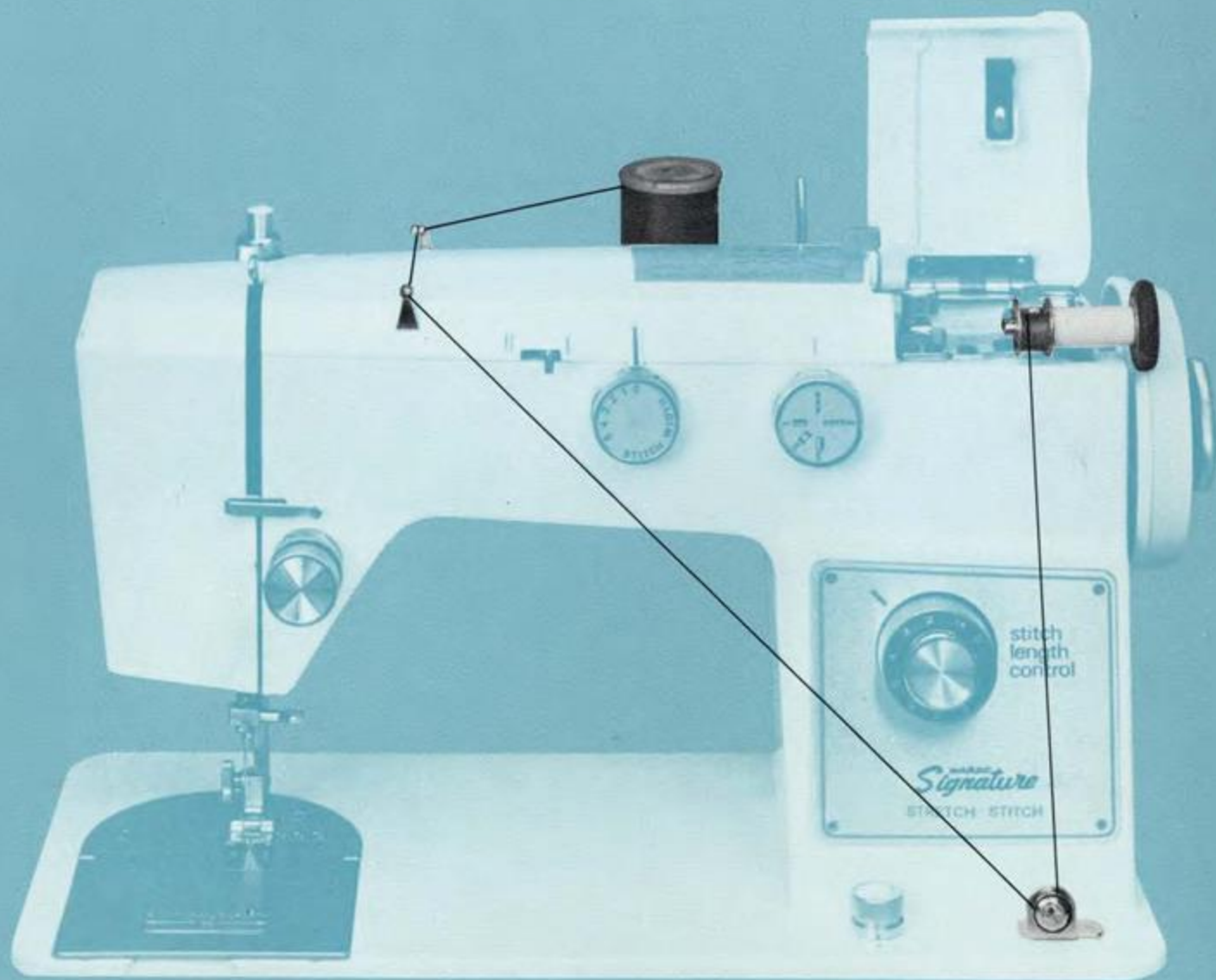
3. Grasp bobbin case latch and withdraw bobbin and case from shuttle body.



To remove bobbin from case, release latch and turn case upside down.

WINDING THE BOBBIN

When your machine has been properly set up for winding the bobbin, it will look like illustration at right. The sequence of steps for this operation is described and illustrated on next page.





1. Free needle bar by holding hand wheel and turning stop-motion knob toward you one-half turn.



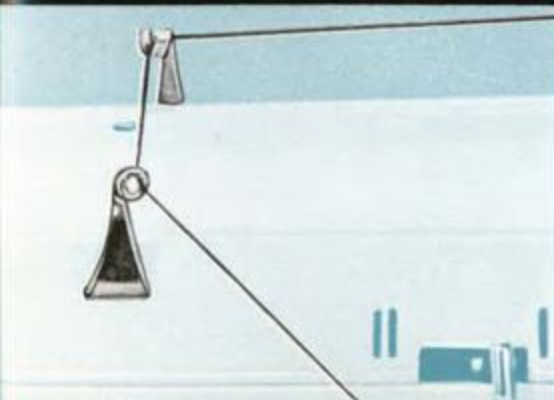
2. Raise bobbin winder cover.



3. Swing bobbin winder so it rests against hand wheel.



4. Place a spool of thread on spool pin. (Important: Wind bobbin with same size thread as upper threading.)



5. Bring thread through two upper guides.



6. Run thread across machine from left to right and up between tension discs.



7. Insert thread through any hole on the left side of the bobbin from inside out. Leave 3 to 4 inches of thread projecting from the bobbin. Place bobbin on spindle slipping groove in bobbin over spring in spindle. Push on all the way.



Hold end of thread and operate control to start the machine. When spindle starts to spin, end of thread will break off. Spindle will stop when bobbin is full. Remove bobbin from spindle and break thread. Hold hand wheel and tighten stop motion knob by turning it away from you.

NOTE: If bobbin winds unevenly, loosen screw which holds bobbin tension discs and move discs to right or left, as required, to align them with bobbin winder. When the tension discs are properly positioned, tighten the screw.



GOOD



NOT GOOD

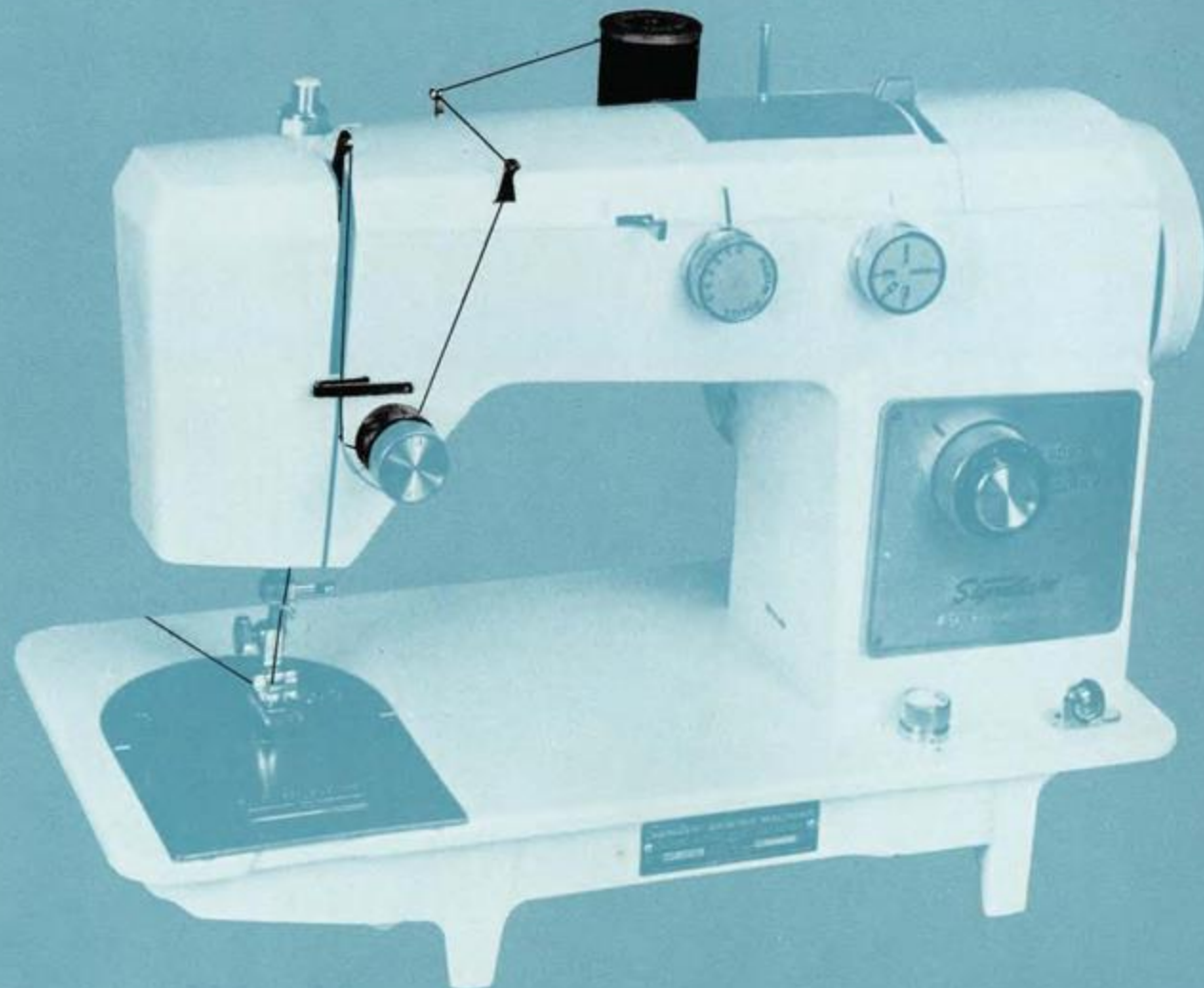


NOT GOOD



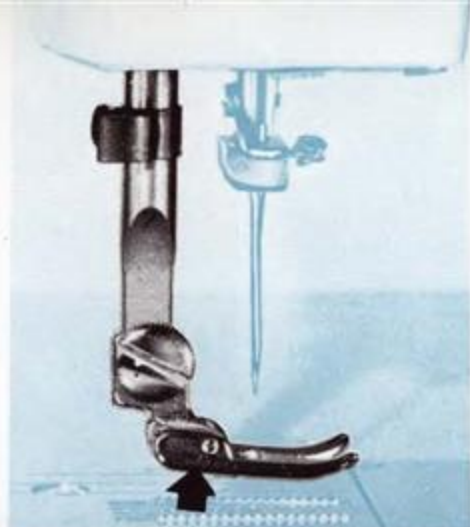
THREADING THE MACHINE

There is only one correct way to thread your machine for sewing. The illustration at right shows machine completely threaded. The sequence of steps is described and illustrated on next page.

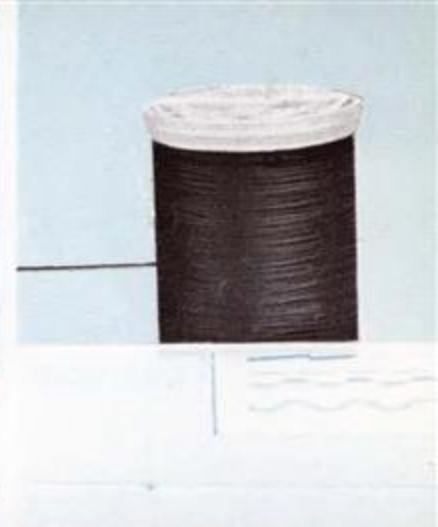




1. Raise presser foot lifter.



2. Turn hand wheel toward you until needle is at its highest point.



3. Place a spool of thread on spool pin.



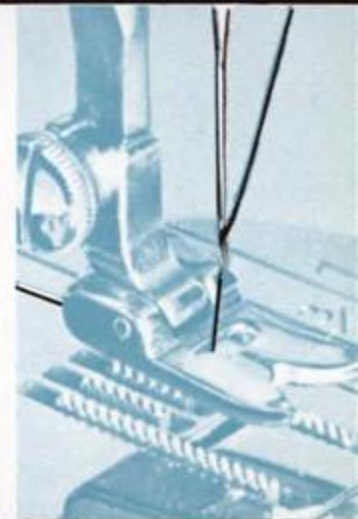
4. Slip thread under and up into rear thread guide; bring thread forward over the arm and through front thread guide.



5. Draw it downward between tension discs from right to left, and bring it up and around into the thread guide notch at the top of the tension dial. Next, bring thread back down and hook it under the check spring; then up through the large hook. Put end of thread through hole in take-up lever from right to left.



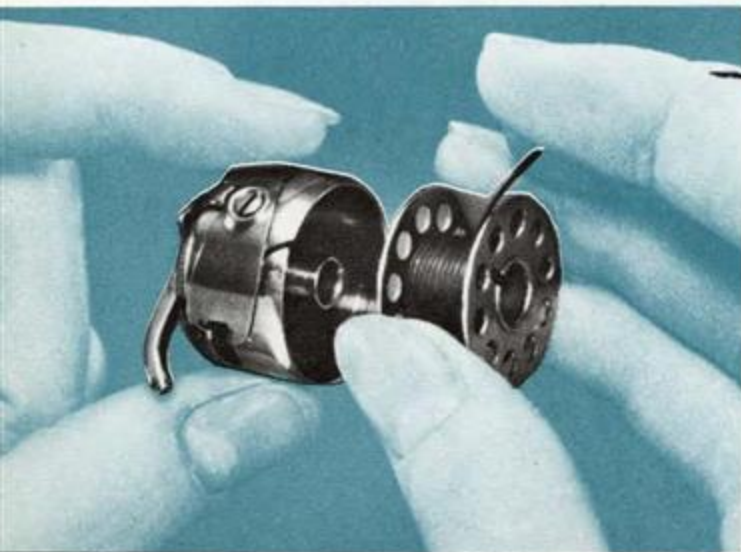
6. Draw thread down through large hook, lower thread guide, and needle clamp guide.



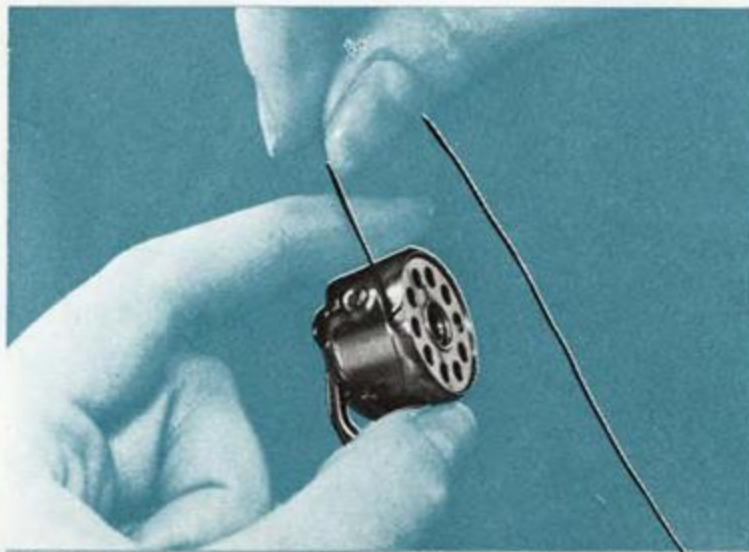
7. Now, pass thread through eye of needle from front to rear.

REPLACING THE BOBBIN bobbin in case

When bobbin has been wound with thread, it must be fitted properly into bobbin case.



1. Hold bobbin case in left hand with the slot in the edge of the case on top. Hold bobbin in right hand with thread on top leading from left to right.

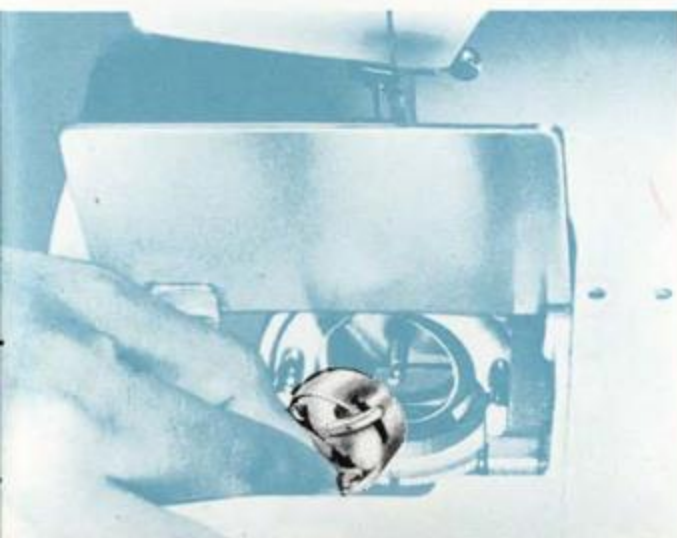


2. Insert bobbin in case and draw thread up into slot in case.



3. Draw thread under tension spring and into fork-shaped opening of spring. Bobbin turns clockwise in case when the extending thread is pulled.

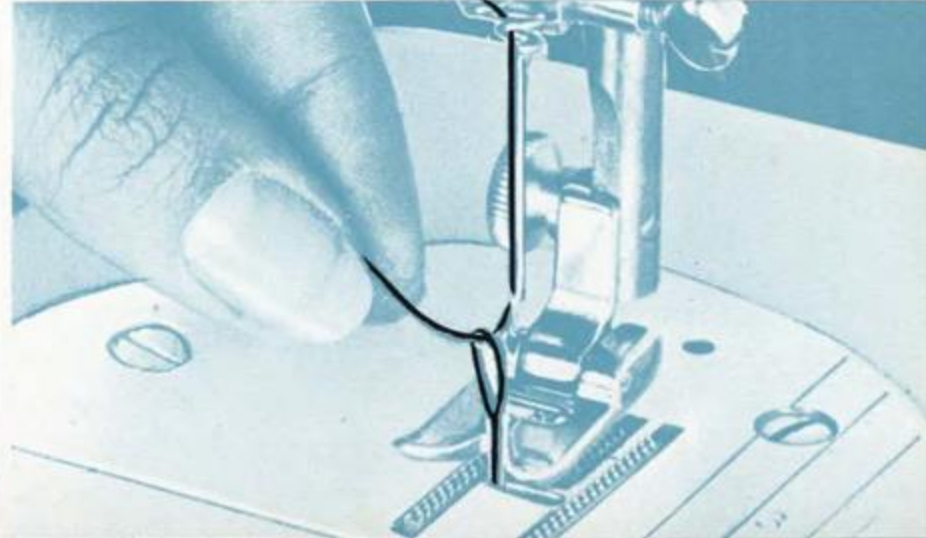
case in shuttle body



1. After threading bobbin in case, open bobbin case latch, grasping it in left hand, with bobbin case finger pointing up.



2. Slip bobbin and case on stud of shuttle body, and press on securely. Release bobbin case latch. Close hinged bobbin case cover.



3. Raise presser foot lever. Hold needle thread loosely in left hand and turn hand wheel toward you one complete turn with right hand. Draw end of bobbin thread up through hole in needle plate by pulling upper thread. Place both threads under presser foot toward rear of machine.

SEWING

When you have followed the steps outlined up to this point, your machine is threaded and ready to sew. However, before actually working on your garment, use a scrap of the material you will be sewing to test the stitching. Some adjustment in stitch length, pressure, or tension may be required. The following pages tell you how to make these adjustments.

Before placing material on the machine, check to be sure both presser foot and needle clamp screws are tight.

- *Draw both threads under the presser foot to the rear of the machine, and turn the hand wheel toward you until the needle is at its highest point.*
- *Place double thickness of material under the presser foot, insert needle into material by rotating hand wheel toward you, and lower the foot.*
- *Press the foot or knee control, and start to sew. While sewing the hand wheel must always turn forward. The speed at which the machine runs depends on the amount of pressure placed on the control.*
- *Guide the material, but do not pull it.*
- *Check the stitching, both top and bottom, and make any adjustment necessary to produce a perfect stitch.*

REMEMBER—*never operate the machine without material under the foot . . . avoid sewing off the end of the material as this will jam the machine . . . always disconnect the wall plug when the machine is not being used.*



FABRIC FEED ADJUSTMENT

The fabric feed projects up thru the needle plate, directly below the presser foot. Its function is to move the material being sewn. It can be raised or lowered for various types of material and work, by turning "Sew-Darn" knob.



FOR ORDINARY STRAIGHT STITCH OR ZIGZAG SEWING, turn knob to "Sew". This raises fabric feed to its highest position.



FOR DARNING OR FREE MOTION EMBROIDERING, or whenever material is to be moved by hand, turn knob to "Darn" to lower the feed.

"Sew and Darn" knob controls fabric feed.

When fabric feed is lowered or raised for a specific purpose, pressure on the foot should be increased or reduced correspondingly (see page 20).

SETTING LENGTH OF STITCH

Your sewing machine can make from six to thirty stitches per inch. As a rule, firm, close-woven material takes a shorter stitch. Loosely woven fabrics sew best with a longer stitch. Very thick, bulky materials, whether firm or loosely-woven, require a longer stitch.



For shortest stitch, turn dial to "1".



For longest stitch, turn dial to "8".

When indicator points below $\frac{1}{2}$, material does not move.

MOST NORMAL SEWING is done with stitch length knob set at 4 or 5. This produces a medium length stitch which makes a strong seam and is suitable for most materials.

DIRECTION OF FEED REVERSE STITCHING

Material normally moves from front to rear (away from the operator) when sewing.

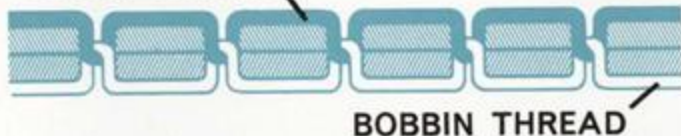


To sew in reverse, as for tacking ends of seams, depress button in center of Stitch Length Control and hold. Machine will feed material in reverse as long as button is held in all the way.

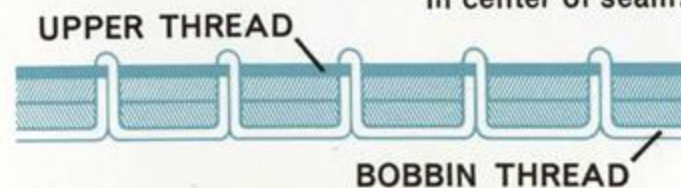
REGULATING THREAD TENSION

Thread tension must be properly balanced. If adjustment is required, it can usually be made by regulating needle thread tension —NOT bobbin thread.

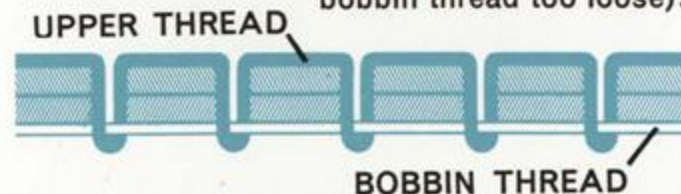
CROSS SECTION VIEW OF TWO LAYERS
OF MATERIAL



CORRECT—needle and bobbin threads locked in center of seam.



NEEDLE THREAD TENSION TOO TIGHT (or bobbin thread too loose).



NEEDLE THREAD TENSION TOO LOOSE (or bobbin thread too tight).

When stitch is unsatisfactory and seam puckers, tension may be too tight on both upper and lower threads.



ADJUSTING NEEDLE THREAD TENSION

- *TO INCREASE*, lower presser foot and turn tension knob to a higher number.
- *TO REDUCE*, lower presser foot and turn tension knob to a lower number.

If it is impossible to balance the stitch by adjusting needle thread tension, it may be necessary to make a slight adjustment in bobbin tension, which was preset and tested at factory.



ADJUSTING BOBBIN THREAD TENSION

(NOTE: This is a very delicate adjustment and may require no more than a quarter turn of the screw.)

- *TO INCREASE*, turn screw on bobbin case tension spring slightly to the right.
- *TO REDUCE*, turn screw to the left.

ADJUSTING PRESSURE ON MATERIAL

When sewing, the material is held in position between the presser foot and fabric feed. Pressure on the foot can be adjusted for different weight materials. Pressure is correct when material moves along smoothly and evenly, without slipping or assistance from the operator, and stitches are uniform in size.

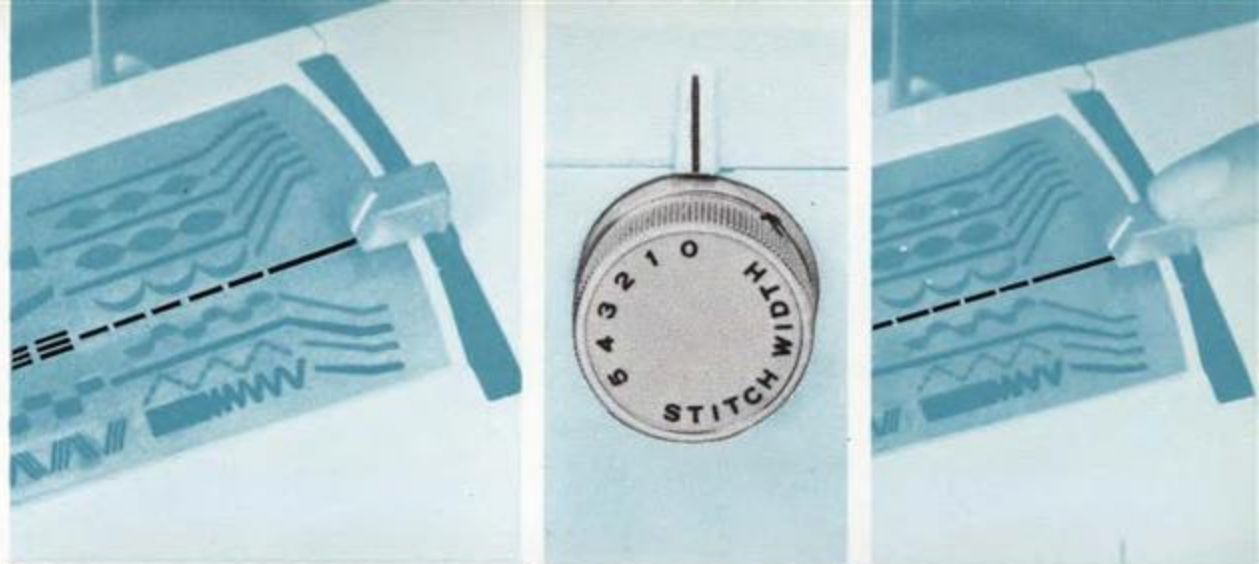


1. To release pressure completely, press down on outer ring of the presser bar. The bar will pop up.

2. Then, push down the bar to the position where correct pressure is obtained. As a rule, the heavier the material, the more pressure required. Too heavy pressure will mar smooth surfaces and pile fabrics; insufficient pressure can cause poor feeding and skipped stitches.

STITCH PATTERN SELECTOR GUIDE PLATE & LEVER

The guide plate on top of the head of the machine shows the type of stitching and decorative stitch patterns your machine is capable of making automatically. The setting of the lever determines which one your machine will make.



Before you begin any type of sewing, set the lever at the proper position. In order to move the lever from one position to another, it is necessary to first turn the Stitch Width Knob to "0." Press down on the lever and move to the desired setting. Lever will snap into place when released. Then readjust the Stitch Width Knob for the specific job to be done.

STITCH WIDTH KNOB

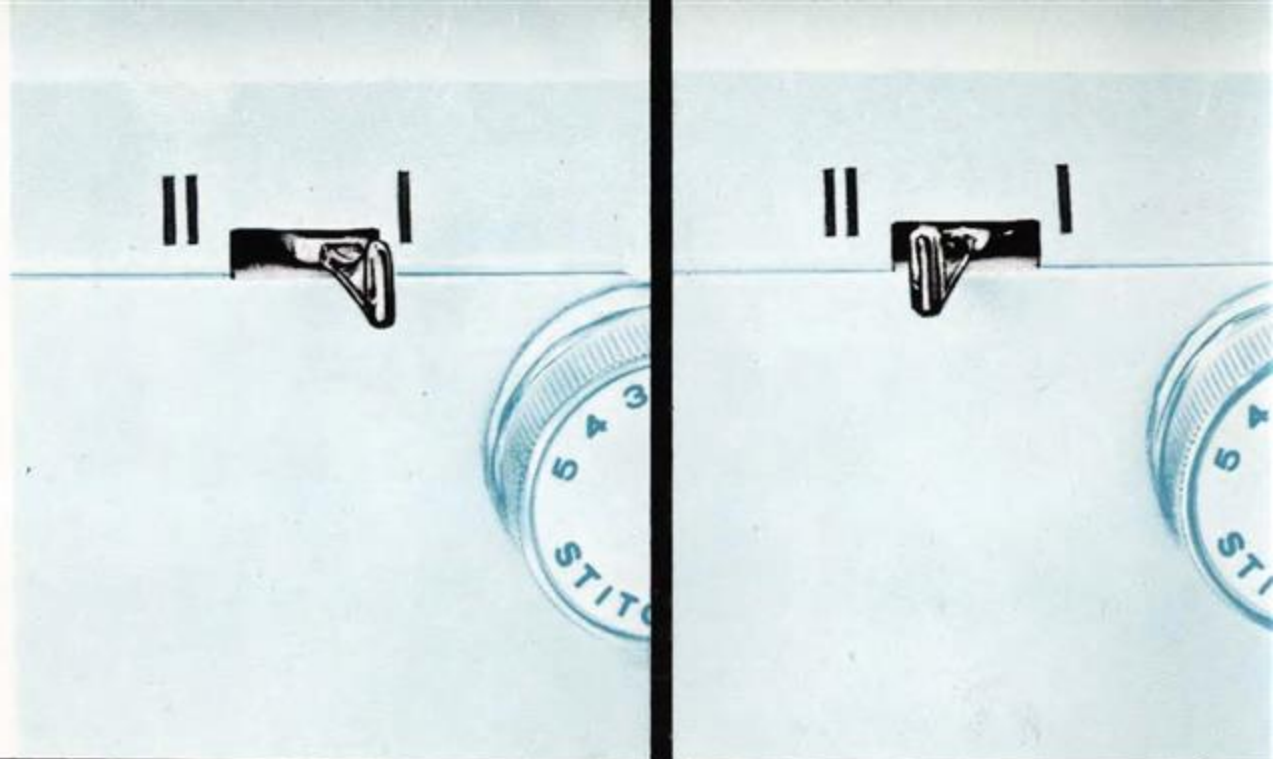
The Stitch Width Knob controls the right-left position of the needle. The setting of this knob limits the width of the stitch in zigzag sewing, or when making the embroidery patterns shown on the pattern selector guide plate.



For straight stitch and most attachment sewing, the knob should be set at "2" for center position of the needle. Instructions in this booklet for each operation specify the correct knob setting.

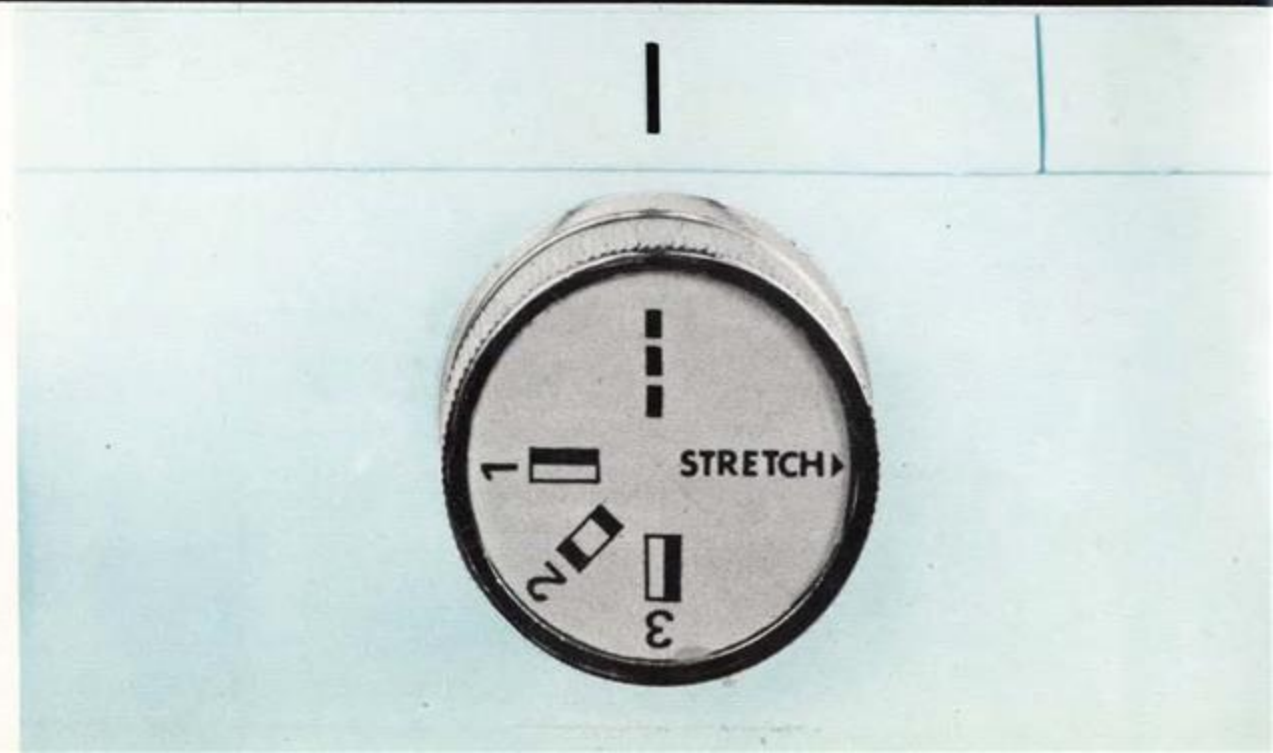
TWIN NEEDLE LEVER

For all sewing with a single needle, the correct position for the Twin Needle Lever is at "I."
When sewing with two needles, set the lever at "II". See instructions under Twin Needle Sewing in the section of this booklet describing the use of the attachments.



BUTTONHOLE MAKER KNOB

The regular sewing or neutral position for the Buttonhole Maker Knob is with the broken line straight up, as shown. This applies to straight stitch and zigzag sewing. The only time the setting is changed from this position is when making buttonholes. See instructions under Buttonhole Foot in the section of this booklet describing the use of the attachments.



GET ACQUAINTED WITH YOUR MACHINE'S ATTACHMENTS

Your new Signature Sewing Machine was shipped from the factory with the regular general purpose sewing foot attached in sewing position. Included with the machine is an Accessory Kit which contains the following:

1 Needle Case (four regular needles—
one double needle)
3 Bobbins
1 Seam Ripper
1 Large Screwdriver
1 Small Screwdriver
1 Thumb Screw
1 Seam Guide

1 Button Sewing Foot
1 Narrow Hemmer Foot
1 Buttonhole Foot
1 Combination Zipper Foot and Quilter
1 Darning Foot
1 Binder
1 Zigzag Presser Foot

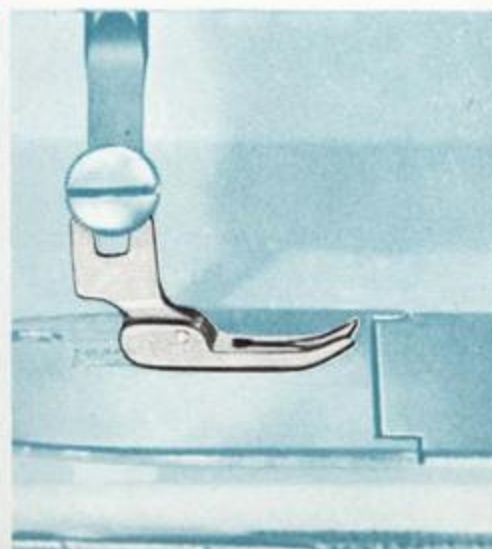
The attachments furnished will help you do special jobs more quickly and easily. While this booklet gives basic instructions for their use, an infinite variety of work can be done with trial and practice. You can finish edges with bias binding, make dainty narrow hems, quilt, make buttonholes, and do many other jobs in a professional way with the attachments.

When you have mastered straight sewing with the regular presser foot, acquaint yourself with the attachments and use them to save time and effort.

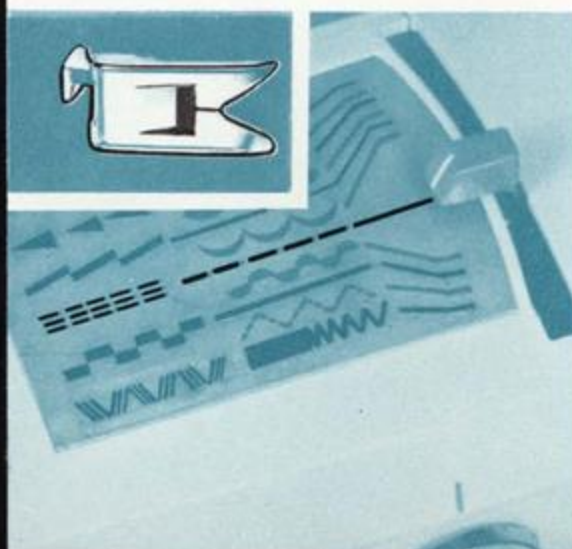
CHANGING THE PRESSER FOOT

The presser foot must be removed in order to use the attachments.

1. Turn the hand wheel toward you until the needle is at its highest point.
2. Turn thumb screw away from you until the foot can be slipped off.
3. Replace with the desired foot or attachment; tighten thumb screw, using screwdriver from the accessory kit to make sure it is secure.



REGULAR
PRESSER FOOT



Whenever a job requiring special adjustment of the controls, or a special sewing foot has been completed, always be sure to return the settings to normal sewing position for straight sewing, and attach the regular presser foot.

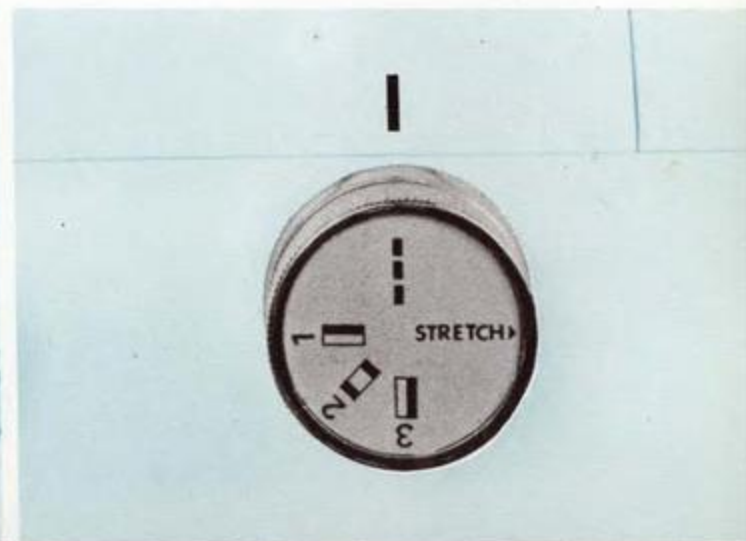
For straight stitch sewing, set the Pattern Selector Lever for straight stitch, and the Stitch Width Knob at "2". This locates the needle in center position.

STRAIGHT STITCH SEWING regular presser foot

Straight stitch seaming and tailoring is done with the general purpose presser foot, and the needle in center position.



stitch
length
control

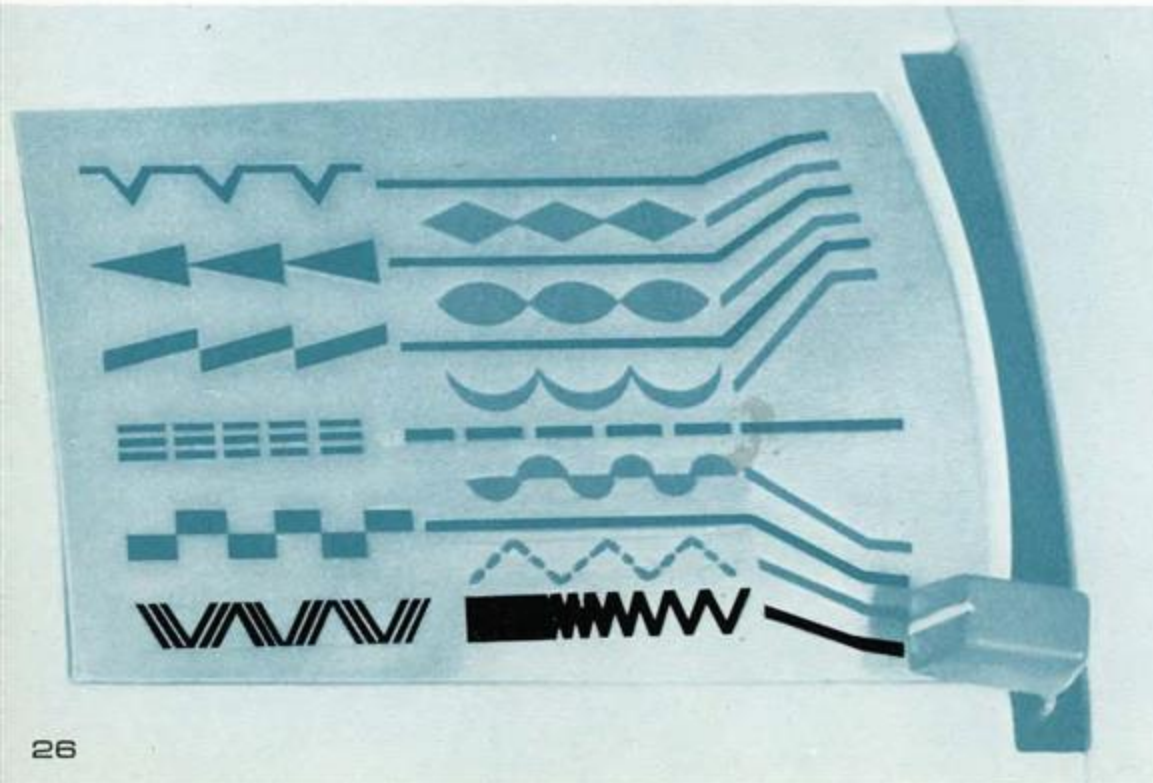


Set the **Stitch Length Knob** to the number which produces a stitch suitable for the material being sewn. Set **Sew/Darn Button** at "Sew", and turn the **Buttonhole Maker Knob** to the neutral or regular sewing position.

ZIGZAG PRESSER FOOT

The zigzag presser foot is used for satin stitching and when making the decorative zigzag patterns shown on the stitch guide plate. This foot has a full indentation on the under side to permit easy sewing over closely spaced zigzag stitches, and even feeding of the fabric.





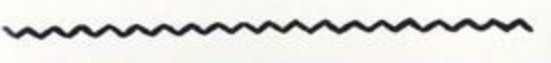

Set the controls for the type of sewing being done, according to the instructions under the specific subject in this booklet.



ZIGZAG STITCHING

Your machine will produce zigzag stitches of various widths and lengths by setting the Stitch Pattern Selector Lever for zigzag stitching and the other controls as specified.

Turn Sew/Darn Knob to "Sew." Keep Buttonhole Maker Knob at regular sewing or neutral position.

REGULAR OR ZIGZAG PRESSER FOOT		STITCH WIDTH KNOB	STITCH LENGTH KNOB
	Extra Wide Zigzag Stitch	No. 5	No. 8
	Wide Zigzag Stitch	No. 4	No. 5
	Medium Zigzag Stitch	No. 2	No. 4
	Narrow Zigzag Stitch	No. 1	No. 2
	Extra Narrow Zigzag Stitch	No. 1/2	No. 2
ZIGZAG PRESSER FOOT			
	Satin Stitch	No. 5	No. 1/2

BINDER

The multiple-slot binder is used to apply binding to an unfinished edge. This type of finish is an attractive trim on children's wear, aprons, and household items. It is also a practical finish for seams which might ravel. Use commercial bias binding, or cut strips diagonally from material. The binder turns under the edges of the binding and covers the edge of the material to be bound in one operation. The largest opening will hold $\frac{15}{16}$ -inch binding. The screw adjustment on the binder permits sewing as close to the edge of the binding as desired.



1. Remove regular presser foot and attach binder.

Stitch Pattern Selector—Straight Stitch

Control Sew-Darn Knob—Sew

Settings Stitch Length Knob—Optional to suit material

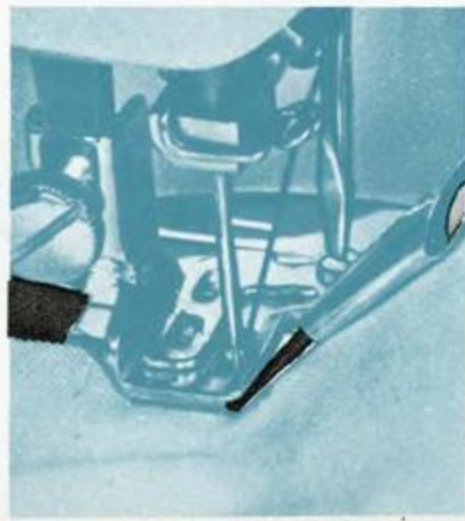
Stitch Width Knob—No. 2

Raise presser foot, turn hand wheel until needle is at highest position.

28

2. Fold binding in the center, and about 2 inches from the end, cut a diagonal slit from the edge inward to about $\frac{1}{8}$ " from the center fold.

3. Hold the "tail" end of the tape, folded, in the left hand, and the portion back of the slit, unfolded, in the right hand. Slide tape into the center opening in the binder, and pull "tail" end



through, beyond the raised needle. This works the binding into the end opening of the cone-shaped scroll.

4. Insert material to be bound into center opening of scroll. Slide end down under needle between the folded bias strip. Turn hand wheel toward you to lower needle into material and binding.
5. Loosen adjustment screw and adjust scroll portion of binder to the right or left as required, so that stitching will come at edge of binding. Tighten screw.
6. Lower presser foot and sew in the normal manner, guiding fabric with left hand, and binding with right. Curved edges require careful handling to avoid stretching or slipping.

NOTE:

For more decorative finishes, set the Pattern Selector Lever for zigzag stitching, or one of the zigzag patterns, and use contrasting color thread. Practice for special effects on a piece of the material before sewing finished article.

DECORATIVE EMBROIDERY PATTERNS

A great variety of decorative embroidery can be created by combining several rows of the same or different patterns on the guide plate and using different colors of thread.

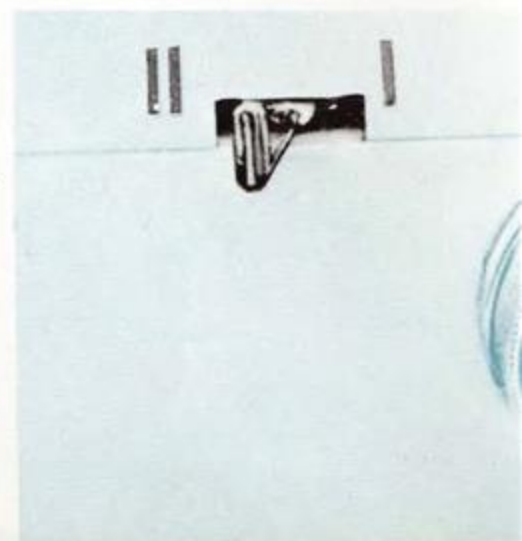
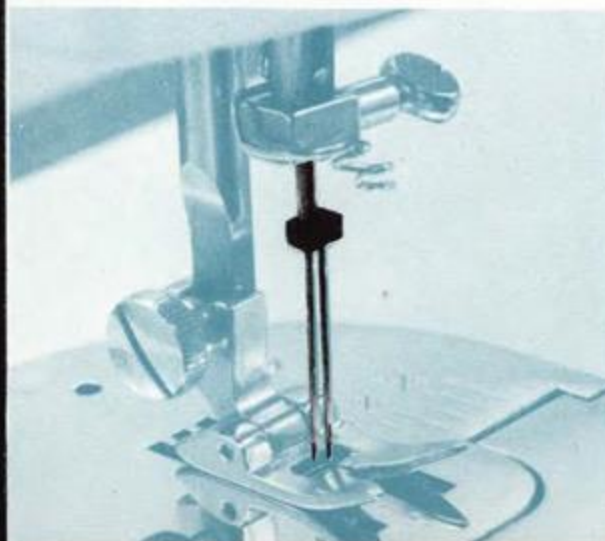
To reproduce any of the patterns in the same size as shown on the Pattern Selector Guide Plate, attach the Zigzag Presser Foot and set the stitch width knob at "0." Set the Selector Lever to the desired pattern. Turn the Stitch Length Knob to between "1" and "0", and return the Stitch Width Knob to No. 5.



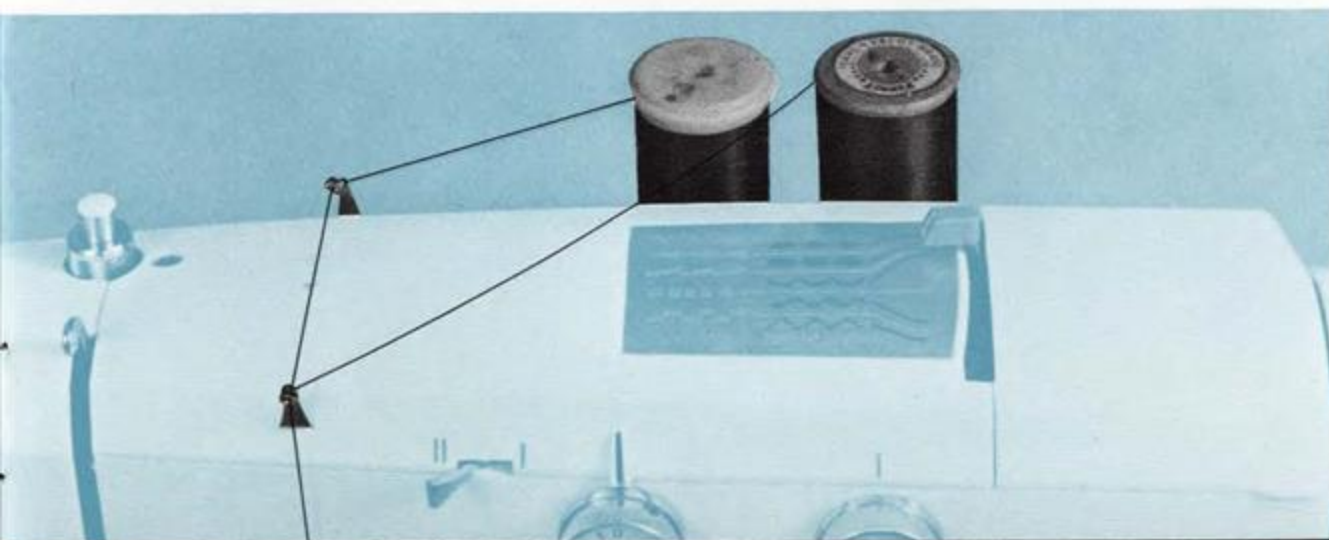
To make one-half the pattern shown, turn Stitch Width Knob to No. 3. To elongate the pattern, turn Stitch Length Knob to a higher number.

TWIN NEEDLE SEWING

Interesting straight stitch, zigzag and embroidery patterns can be produced by using twin needles and threading the machine with two different colors of thread. Always make test samples to help you determine the settings best suited to a specific purpose.



1. Remove single needle and insert twin needles. Use regular or zigzag presser foot.
2. Move Twin Needle Lever to the left as far as possible.



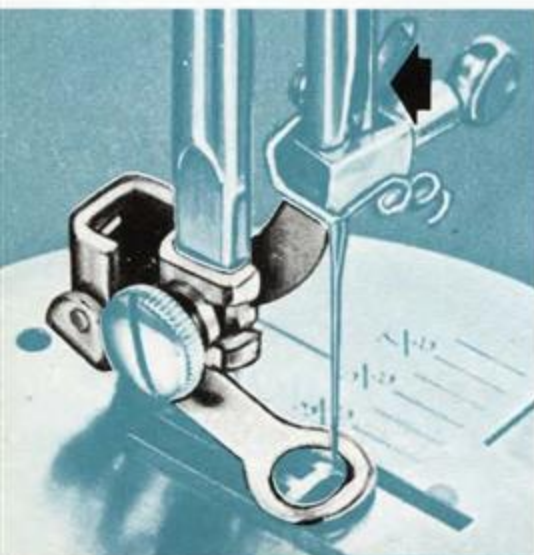
3. Place a spool of thread on each spool pin. Thread the forward spool in the regular way. Run the thread from the back spool pin directly to the front thread guide. Then follow normal threading procedure, using second needle for this spool of thread.



4. Set Pattern Selector Lever and Stitch Length Knob to produce the pattern and stitch desired. Maximum setting on Stitch Width Knob, when sewing with two needles, is #3. This means that any zigzag pattern produced with twin needles will be half of that shown on the Pattern Selector Guide Plate.

DARNER FOOT

Worn or torn areas on household items and clothing can be darned quickly with little practice using the darner foot.



1. Remove regular sewing foot and attach darning foot with arm at back of needle clamp.

2. Control Settings: Stitch Width Knob—0, Stitch Pattern Selector Lever—Straight Sewing, Sew-Darn Knob—Darn, Release pressure on presserbar. Return Stitch Width Knob to $2\frac{1}{2}$.

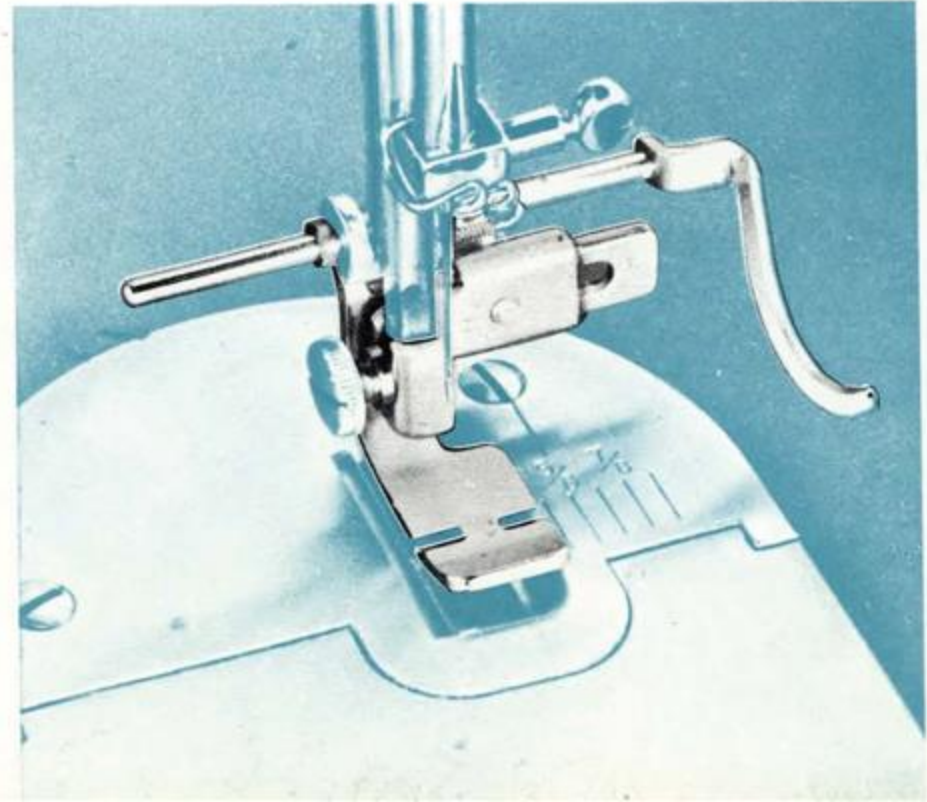
3. Place material under foot; lower presser bar. Grasp material firmly in front and back of area to be darned. Operate machine, moving material forward and backward with an even motion, stitching in closely spaced rows over the hole or worn area.

4. Be sure to stitch into the firm material at each end. When the area is filled with new stitches, move material from side to side in a similar manner to weave or reinforce the stitching. NOTE: Reinforce open areas with an underlay; baste underlay in place before darning.

ZIPPER FOOT & QUILTER

This combination attachment is designed for stitching close to a raised edge. When sewing zippers and cording, the quilting guide bar is removed and the foot can be adjusted to either the right or left side of the needle for sewing close to the edge of the zipper or cording.

With the quilting bar inserted, it is used as a guide for making successive parallel rows of stitching.



Sewing Zippers and Cording



1. Remove the quilting guide from the zipper foot and attach foot to the presser bar.



2. Loosen thumb screw on the horizontal bar and slide foot to the right or left of the needle so stitching can be made close to the edge of the zipper or cording. Test position by slowly turning hand wheel and lowering needle into the notch in the foot. When desired position is located, tighten screw.



3. Control Settings
Stitch Pattern Selector Lever—
Straight Stitch
Sew-Darn Knob—Sew
Stitch Width Knob—No. 2
Stitch Length Knob No. 3, or adjust
for weight of material

Quilting



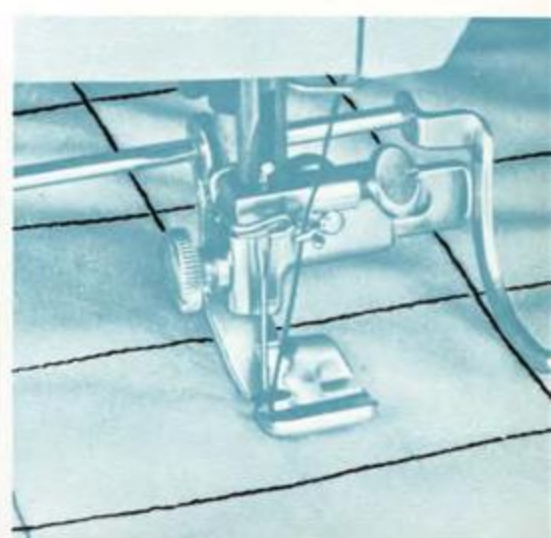
1. Insert Quilting Guide in Zipper Foot and attach foot to the presser bar. Quilting Guide may be inserted to project either to the right or left of the foot, whichever is more convenient for handling the object being sewn.



2. Place fabric under the foot and adjust the curved portion of the guide bar so it will lightly rest on the material at the distance from the needle desired between rows of stitching.



3. Set controls for a medium length or long straight stitch (depending on material), and sew the first row of stitches.



4. Move the material over and sew successive rows with the guide riding along on the previous row of stitching.

BUTTONHOLE FOOT

The buttonhole foot is designed for maximum visibility and rides easily over the buttonhole stitching.

A buttonhole consists of two parallel rows of satin stitches connected at the ends. Correct positioning of the material, and accurate measuring and marking of the hole length are important in producing a professional-looking buttonhole. Material must be guided carefully so that lines of stitching will be straight and close together, but not touching.

First work a sample buttonhole in the same fabric as the garment. Use a double thickness, and include facing and interfacing if these have been used in the garment.

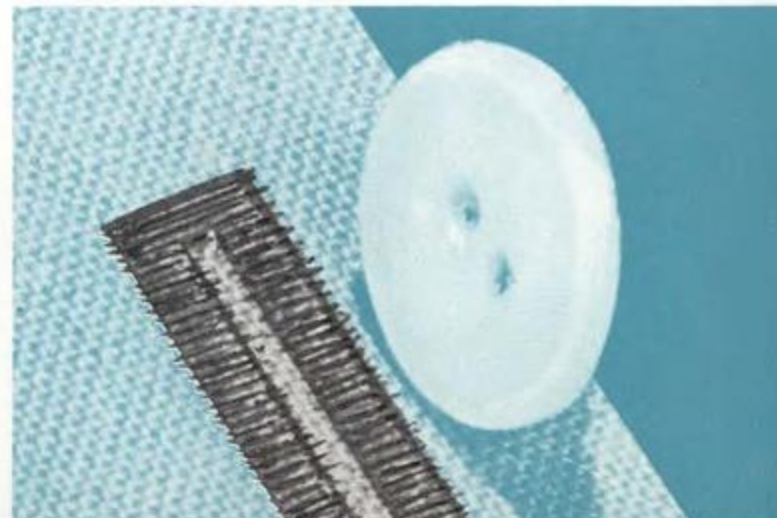
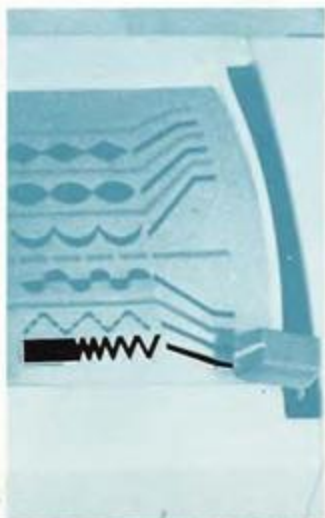
1. Remove regular presser foot and attach buttonhole foot.

2. Set Controls:
Stitch Pattern Selector—Zigzag Stitch
Sew-Darn Knob—Sew

Stitch Width Knob—5
Stitch Length Knob—White Dot

3. Turn Buttonhole Maker Knob to No. 1

4. Mark position and length of buttonhole on fabric. Length of the hole is determined by the width and thickness of the button combined. The finished buttonhole should be $\frac{1}{8}$ -inch longer than this measurement to allow for bar tacks at the end.



5. Position material under buttonhole foot so that needle, on the left-hand downward swing, enters material on the mark at end nearest you. When correct position is located, turn hand wheel one complete turn forward, so needle goes down and up again, bringing up the bobbin thread on the surface of the material. Lower presser bar and draw out bobbin thread. Sew at moderate speed until stitching reaches other end of mark.
6. Stop at the "end" mark with the needle out of the material. Turn Buttonhole Maker Knob to #2 and make 2 or 3 bar-tack stitches stopping with the needle out of the material. Turn Buttonhole Maker Knob to #3. This reverses the feed of the material. Guide material, sewing in straight line parallel to the first row of stitches, until you reach the original starting point of the mark. Stop with the needle out of the material. Turn Buttonhole Maker Knob back to #2 and make 2 or 3 bar-tack stitches. This will complete the buttonhole. Stop the machine, raise presser bar, and remove material.
7. Draw upper thread through to under side, and knot upper and bobbin threads. Cut center of buttonhole with embroidery scissors or seam ripper, being careful not to cut stitching on either side. When buttonhole making is completed, reset Buttonhole Maker Knob and other controls for desired sewing.

BUTTONHOLE ADJUSTER

The Buttonhole Adjuster enables you to make a perfect buttonhole every time on all types of fabrics. This adjuster is the knob located under the cover plate to the left of the bobbin winder.

Before working on the finished garment, make a "practice" buttonhole on a scrap of the material, using double thickness, and inner facing, if one is used in the garment. Set the controls according to the instructions for making buttonholes on Page 36.

Vary the adjustments until you get a satisfactory stitch on both sides of the buttonhole before you start on your finished garment.



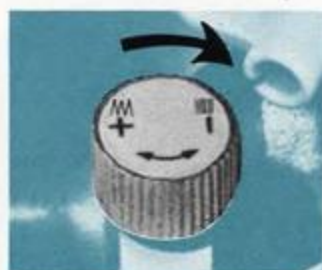
RIGHT

1. The buttonhole adjuster knob regulates the tightness of the stitch on right or reverse side of the buttonhole.



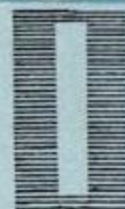
Right or Reverse
Side too loose

2. Turning buttonhole adjuster counterclockwise tightens stitch.



Right or Reverse
Side too tight

3. Turning buttonhole adjuster clockwise loosens stitch.



LEFT

4. The stitch length knob regulates the tightness of the stitch on the left or forward side of the buttonhole.



Left or Forward
Side too loose

5. Turning stitch length knob toward "0" tightens stitch.



Left or Forward
Side too tight

6. Turning stitch length knob toward "2," or beyond, loosens stitch.

EXAMPLES



Both
sides correctly
adjusted.



1. Remove regular sewing foot and attach button sewing foot.

2. Control Settings—
Stitch Pattern Selector—Zigzag Sewing
Sew-Darn Knob—Darn
Presser Bar—Down

3. Raise sewing foot and place button between foot and fabric. Turn hand wheel toward you by hand and check to be sure needle goes down into the *left*-hand hole in the button at the *left* side of the foot. Lower the presser foot.

BUTTON SEWING FOOT

It is possible to sew two- or four-hole buttons with your Signature machine.



4. Space between holes in the button determines the Stitch Width setting. Set knob at No. 3 or 4 and again slowly turn the wheel by hand to see if the needle enters the right-hand hole in the button. If not, adjust the knob to a higher or lower number until the needle clears each hole.

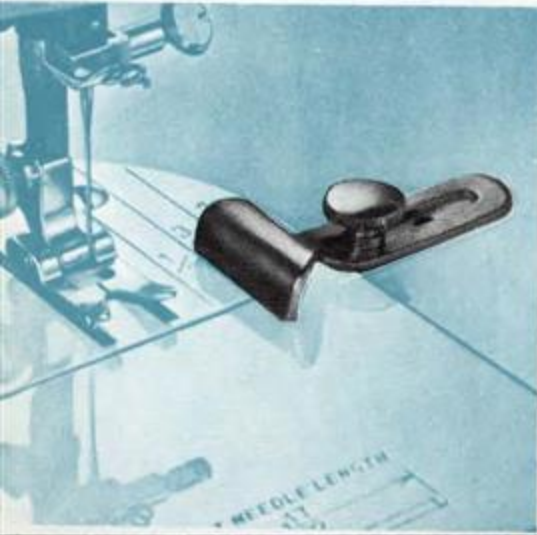
5. When stitch is properly adjusted, run machine at medium speed, making four or five stitches.
6. To lock stitch and prevent raveling, set Stitch Width knob at "0" and turn wheel toward you by hand to make sure needle goes into center of the hole. If it clears, make a few straight stitches in the same hole. Lift presser foot and remove material.
7. To sew a 4-hole button, follow the procedure above for the first two holes. Then lift presser foot slightly and move fabric to permit stitching the other two holes, either independently, or crisscross over the first two holes.
8. Hooks, snaps, etc., may be attached to garments in the same manner as sewing on buttons.

NOTE: A rounded toothpick may be placed on the button between the two holes while the button is being sewn to the fabric. When the toothpick is removed, the button will be loosely attached. Pull button up and wind thread around the threads holding the button to form a stem.

SEAM GUIDE

The seam guide is designed to aid in making seams of uniform width, and accurately spaced rows of decorative top stitching on collars, lapels, pockets, children's clothes, etc. It is used with a presser foot for both straight stitch and zigzag sewing, and attaches to the bed of the machine in either of the threaded holes to the right of the needle.

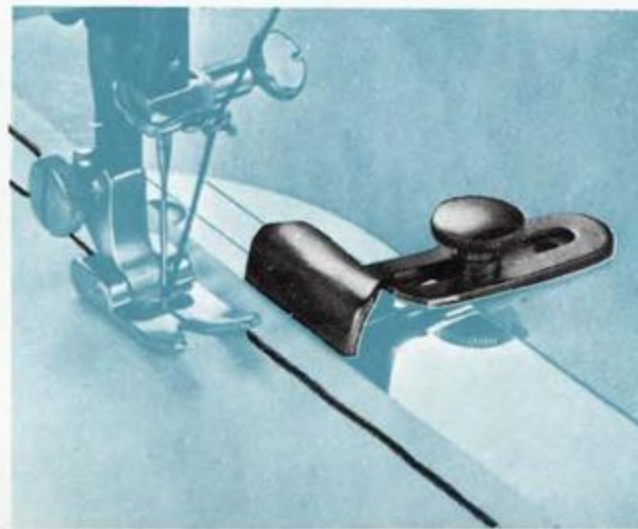
straight seams



1. After attaching the proper foot and setting the controls for the stitch desired, fasten the seam guide loosely with the thumb screw which is in the attachment box. Adjust to the required distance from the needle and tighten the screw.

top stitching

STRAIGHT AND ZIGZAG SEWING



1. Attach the guide as for straight seams at the desired distance from the edge and sew the first row of stitching.
2. Move the guide back as required for successive rows of stitching.

curved seams



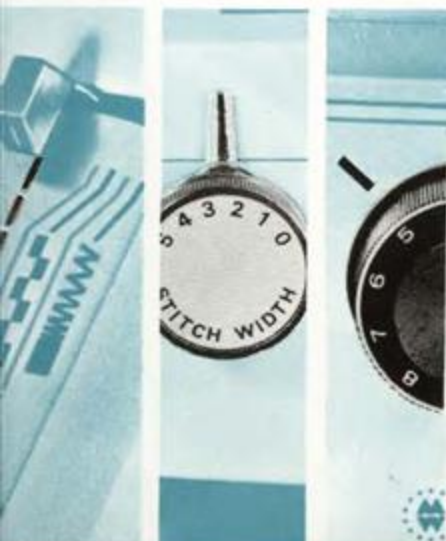
1. Set the guide at an angle so the end closest to the needle just touches the material.
2. A very short stitch or tiny zigzag stitch provides greater strength and elasticity.

NARROW HEMMER

The narrow hemmer is used in place of the regular presser foot to form and stitch a perfectly turned hem about $\frac{1}{8}$ -inch wide without basting or pressing. Sewing may be done with a straight or zigzag stitch.

Remove the regular sewing foot and attach hemmer foot.

For zigzag stitch hemming, proceed as instructed, except set Stitch Pattern Selector Lever for Zigzag Stitch and Stitch Width Knob at No. 1



1. For *straight stitch* hemming, set the controls:
Stitch Pattern Selector Lever—Straight Stitch

Stitch Length Knob—4
or 5



2. Crease an eighth-inch double fold for about 2 inches along edge of material. With presser foot raised, insert end of folded edge into the spiral opening of hemmer foot. Move material back and forth until beginning of hem forms itself in scroll.



3. Turn hand wheel by hand so needle enters material at edge of hem. Lower presser foot. Hold thread ends in left hand and guide raw edge of material in front of hemmer evenly into scroll. Sew slowly and continue to hold thread ends until hem is well started through scroll.



4. Even feeding is essential for good hemming. If too much material enters scroll, hem will be irregular; if too little material is fed into scroll, hem will have a raw edge.

VARIOUS SEWING PROCEDURES

basic sewing tips

Acquiring proficiency in tailoring and garment-making is a matter of practice. Your new Signature Zigzag Sewing machine will do practically "anything" you can expect a sewing machine to do once you have mastered its operation and some sewing techniques.

For the novice, we are including in this booklet some of the very basic steps in sewing. For your first attempt at sewing, select fabric that is firm, closely woven and easy to handle and cut. Plain colors and small prints eliminate difficult matching. Choose simple apparel patterns of the correct size to avoid alterations, with style features that can be made with a minimum of fitting.

As you become skilled, there is no limit to the variety of work your Signature Zigzag will do for you.



PLAIN SEAM

A plain seam is the most-used and simplest seam. It consists of sewing two pieces of material with the right sides together. Most garment patterns make allowance for a $\frac{5}{8}$ " seam.

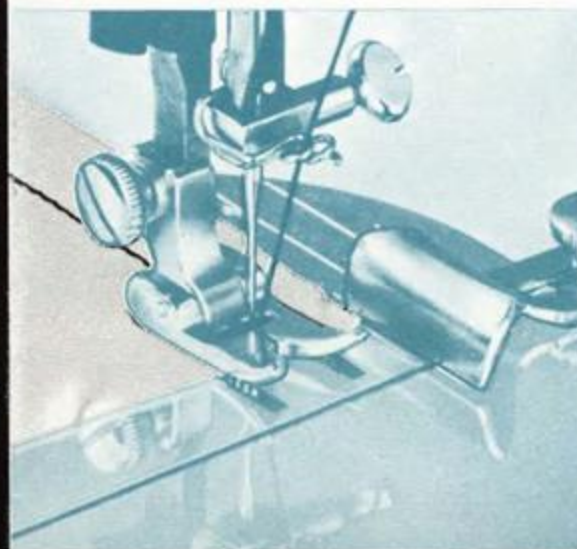
For best results, some materials require basting, especially on curved seams or where one of the two pieces being sewn together is cut on the bias or must be "eased" to match the other.



Set the controls for a straight stitch of a length suitable for the material. Using the seam guide will assure a seam of uniform width. After sewing, if seam is curved, clip at intervals. To prevent raveling, seams may be pinked or machine overcast. Spread out material and press seam flat.

TACKING ENDS OF SEAMS

To reinforce the end of a seam, position the needle in the fabric about $\frac{1}{2}$ -inch from the beginning point and lower the presser foot.



Press the button in the center of the Stitch Length Knob and hold in while backstitching to the edge of the fabric. Release the button and sew the seam. When you reach the end, again hold in the Reverse Button and backstitch for about $\frac{1}{2}$ -inch.

REMOVING THE WORK

When you stop the machine to remove the work, have needle at its highest position. Avoid sewing off end of material.



1. Raise presser foot and draw fabric back and to the left.



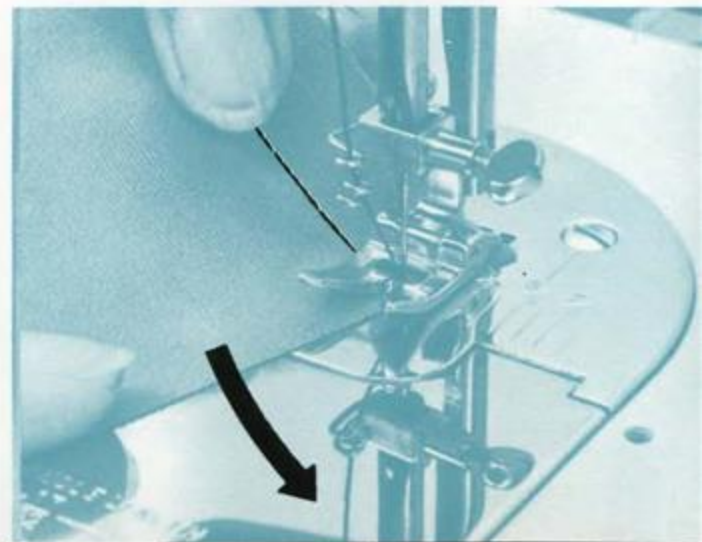
2. Cut threads by passing them over thread cutter, or with scissors.

TURNING CORNERS

To turn a corner, stop the machine with the needle in the material.



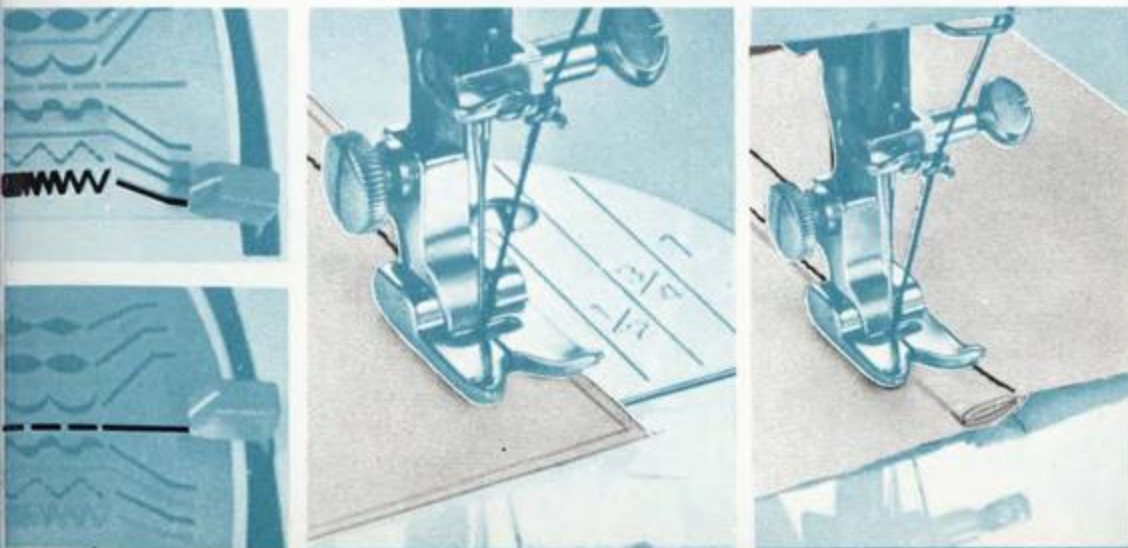
1. Raise the presser foot.



2. Using needle as a pivot, turn material; lower presser foot and continue sewing.

FLAT FELLED SEAM

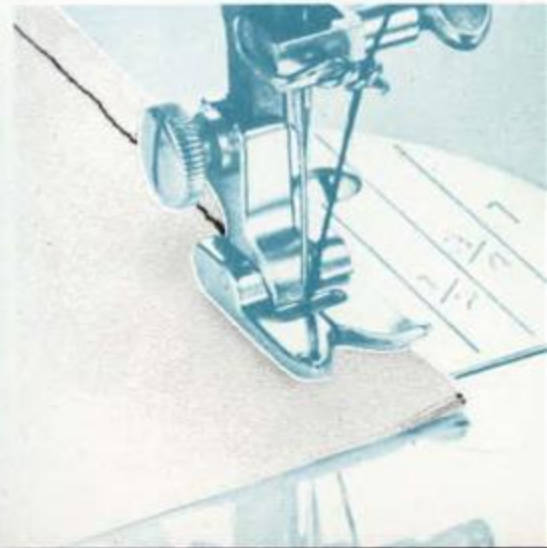
A flat felled seam gives great strength and durability. It provides a finished appearance on the wrong side as well as the right, and is excellent for shirts and blouses, sportswear, etc.



Use either a straight or very narrow zigzag stitch. With right sides of the material together, sew a regular seam, using the normal seam allowance. Press both sides of the seam to one side. Trim away half the under seam allowance. Turn the upper seam edge evenly over the trimmed seam edge and top stitch.

FRENCH SEAM

A tiny French seam is often desirable on lingerie, nightwear and children's clothing of lightweight or sheer material. This type seam provides a completely finished edge on the wrong side of the material.

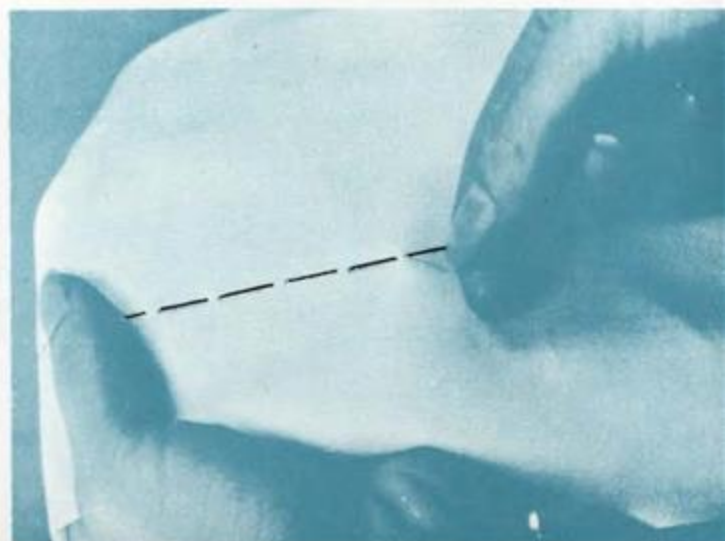
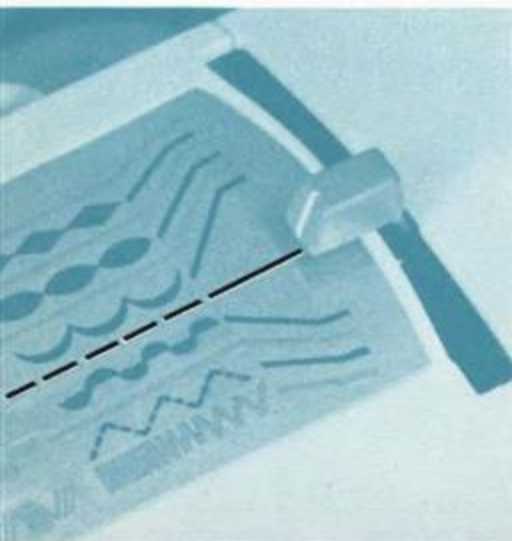


Set controls for a medium or small straight stitch. Place *wrong* sides of material together and stitch $\frac{1}{4}$ -inch from edge. Trim seam allowance evenly to $\frac{1}{8}$ -inch.

Invert material so right sides are together and crease fold along the stitched edge. Stitch again about $\frac{3}{16}$ -inch from edge, or just deep enough to clear the folded-in raw edge.

MACHINE BASTING

For many purposes machine basting is as satisfactory and faster than hand basting.



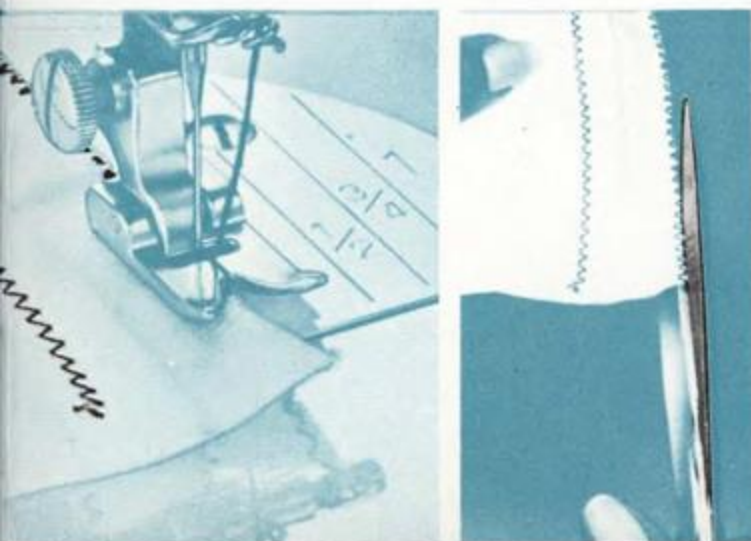
Set controls for straight stitching. Reduce tension on the upper thread by turning tension adjustment knob to a lower number. Set Stitch Length Knob at No. 8. Stitch along the seam allowance.

After permanent stitching of the article is completed, basting stitches can be removed easily by pulling the lower thread.

OVERCASTING SEAMS

Seam edges which tend to ravel can be given a durable finish with machine overcasting. The zigzag stitch or blind stitch is ideal for such finishing.

zigzag overcasting



Set the controls for a zigzag stitch suitable for the weight of the material and the width of the seam allowance. Press seam open and stitch each side separately near the edge of the seam allowance. Trim away excess fabric.

blind stitch overcasting



Set the Stitch Pattern Selector Lever for blindstitching. Set Stitch Width Knob at No. 3 and Stitch Length Knob at No. 4.

Press seam open, trim seam edges evenly, and stitch on the raw edges.

STRETCH STITCH SEWING

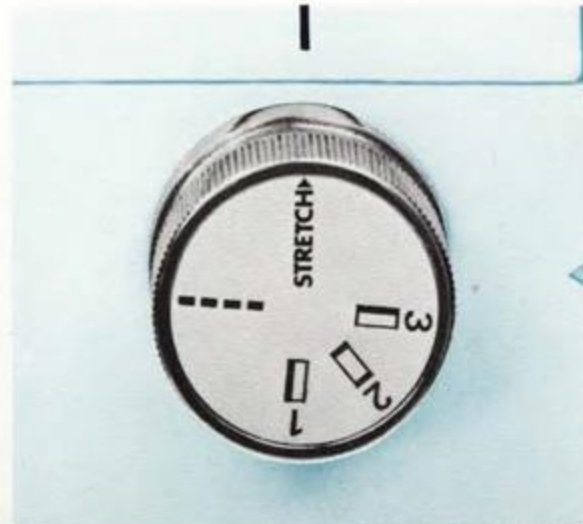
Over 55% of all fabrics sold today are synthetics. Stretch material is used for so many things. But without the stretch stitch it would be impossible to hem these stretch fabrics. That's what's so nice about Model 276 with its built-in stretch stitch. It assures you a stitching that will give with the fabric.....no binding or breaking.



Turn the stitch width regulator knob to "0".



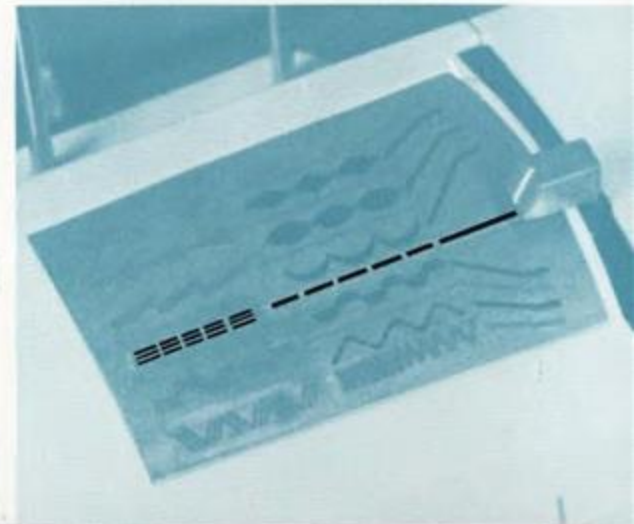
Turn the stitch length control knob to "7 or 8".



Set the buttonholer knob to stretch and pattern selector lever to (=====).

NOTE: This is useful for in-line stretch stitch only.

If selector lever is set at ordinary patterns while buttonholer knob is set in stretch stitch position, it will not damage the machine but at the same time, it will not obtain useful / attractive patterns from some of the patterns.



GATHERING, SHIRRING AND RUFFLING

Material can be gathered, ruffled or Shirred without a special attachment.

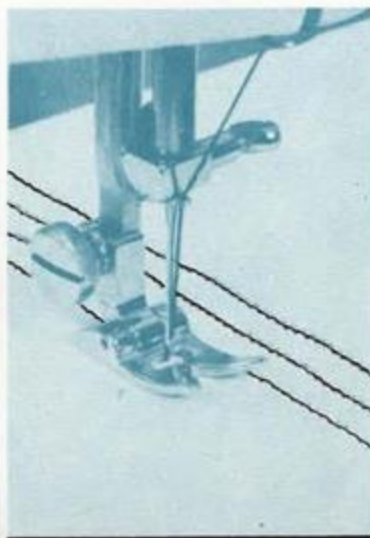
SEWING VERY SHEER MATERIAL



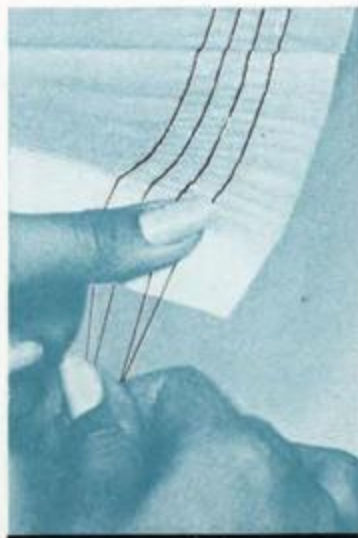
1. Set controls for medium length straight stitch on lightweight material, or long stitch for heavy fabric.



2. Reduce tension on upper thread by turning tension knob to a lower number.



3. Sew a line of stitching, or several equally spaced consecutive lines, depending on the effect preferred.

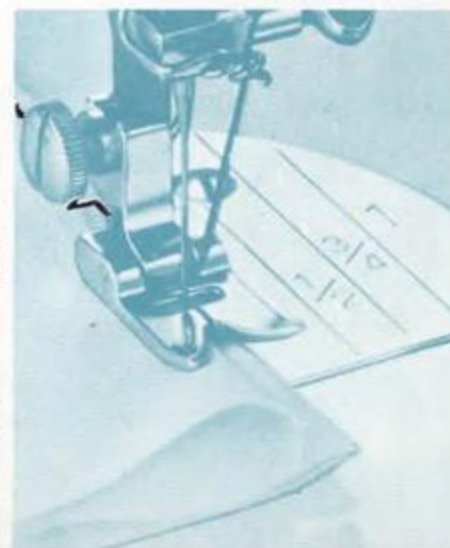
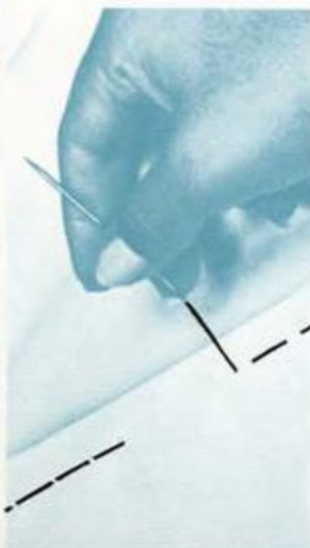


4. Pull ends of bobbin thread and slide material back on threads for the desired fullness.

When sewing very thin material which tends to gather, or which may be marked by the fabric feed, place a thin sheet of paper beneath the fabric while stitching and reduce pressure on the presser bar. The paper can be easily torn away when sewing is completed.

BLIND STITCH HEMMING

Blind stitching produces a durable hem finish which is almost invisible on the right side of the article sewn. It may be used on regular hems, or hems finished with seam binding.



1. Attach regular presser foot. Sew on seam binding, if it is to be used. Measure, turn and press hem in the usual way. If seam binding is not used, make first fold of hem slightly more than $\frac{1}{4}$ -inch.

2. Baste hem $\frac{1}{4}$ -inch from top edge.

3. Control Settings
Pattern Selector Lever—Blind Stitch
Stitch Length Knob—No. 4
Stitch Width Knob—No. 2

4. Turn back bulk of hem to basted line and lay edge under sewing foot. Position so that needle will make straight stitches on protruding edge, and sideward stitches pierce fold.

5. When hem is completed, remove the work and press flat.

HEMSTITCHING

Machine hemstitching is an easy method of giving a custom look to table linens, bedding and lingerie. Best results are obtained on coarse or loosely woven fabrics of cotton and linen.



1. Pull out successive rows of thread to the desired width.



2. Set controls to make a narrow, medium length zigzag stitch.



3. Place edge of material from which threads have been pulled under presser foot. Guide fabric so needle bites into open space as well as fabric from which threads have not been pulled.



4. When stitching on one side of the open space is completed, reverse material and stitch along the other side.



To make a picot edge, pull out only two or three rows of threads. After stitching trim away pulled thread area close to outer points of zigzag stitches.

FREE-MOTION EMBROIDERY

Free-motion machine embroidery is attractive and practical on wearing apparel and many household items. It is impossible to describe the unlimited effects that can be produced when the operator acquires dexterity in this method of embroidering. However, each pattern requires different handling which can be achieved by test and practice.

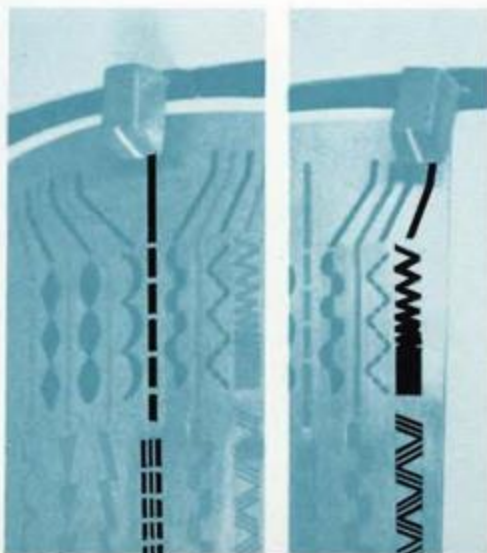
Basic steps in free-motion machine embroidering are:



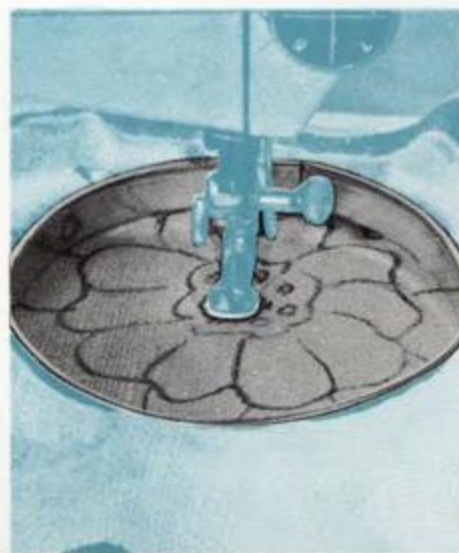
1. Remove the regular presser foot and attach the Darning Foot.



2. Set "Sew/Darn" Knob at DARN. Remove all pressure on presser bar by pressing down the outer ring.



3. Set the machine for straight stitch or zigzag stitch of the desired length and width.



4. Place design to be embroidered between the two sections of embroidery hoop. Set embroidery hoops under needle and lower presser bar.



5. Start running machine at medium speed, guiding hoop carefully so needle moves along line of the pattern.

APPLIQUE

Applique is a cut-out design of one fabric sewn to another. This method of decoration adds beauty and interest to wearing apparel and household items. The design may be finished with a satin stitch or close zigzag stitch.

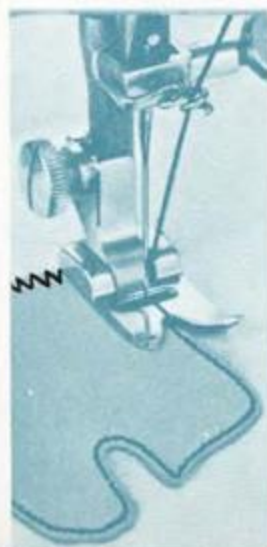
Alternate Method:



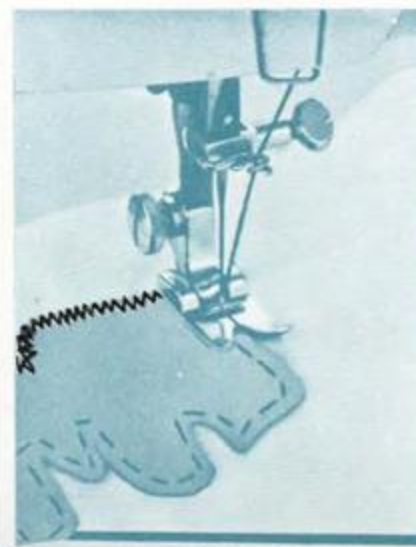
1. Position the design and baste it to the material.



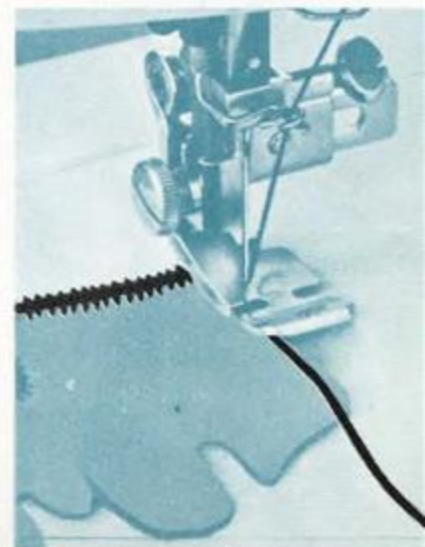
2. Set controls for satin stitch or close zigzag stitch. Sew around entire edge of design. When stitching is completed, trim away any excess fabric around the outer edge.



1. After basting, outline entire design with a short straight machine stitch. Trim edges close to stitching.



2. Readjust machine for zigzag stitching. Overstitch edge of design. This results in a smooth finish which requires no trimming.

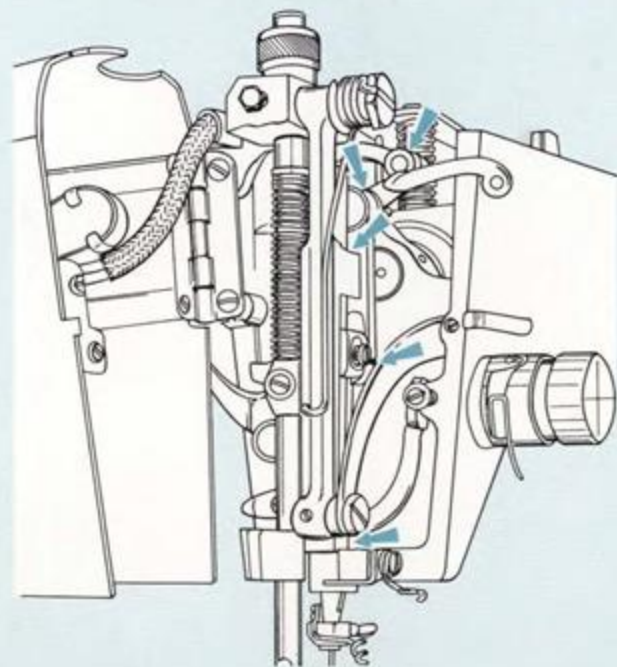


3. For a corded or raised edge use zipper foot and zigzag stitch over cord in design edge. Use croch cotton, gimp, or button hole twist for cording.

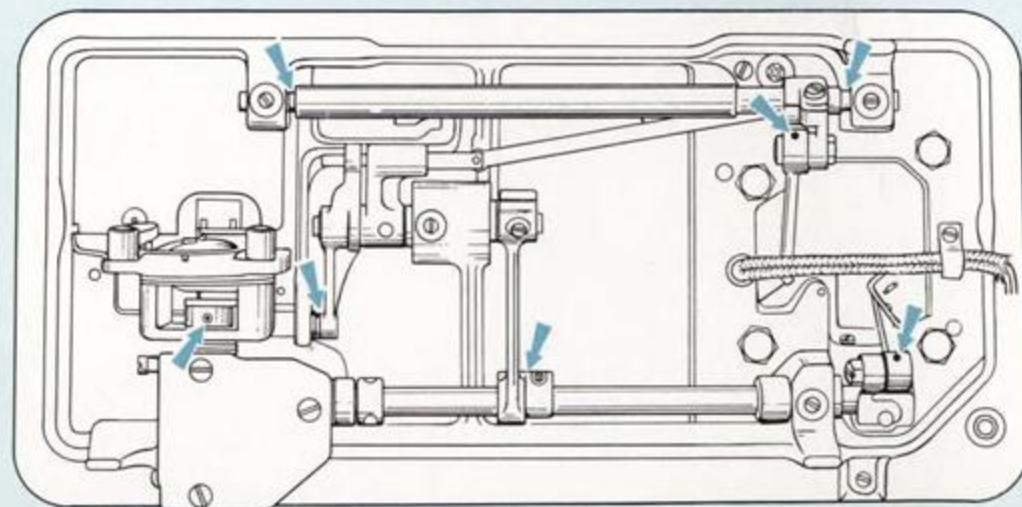
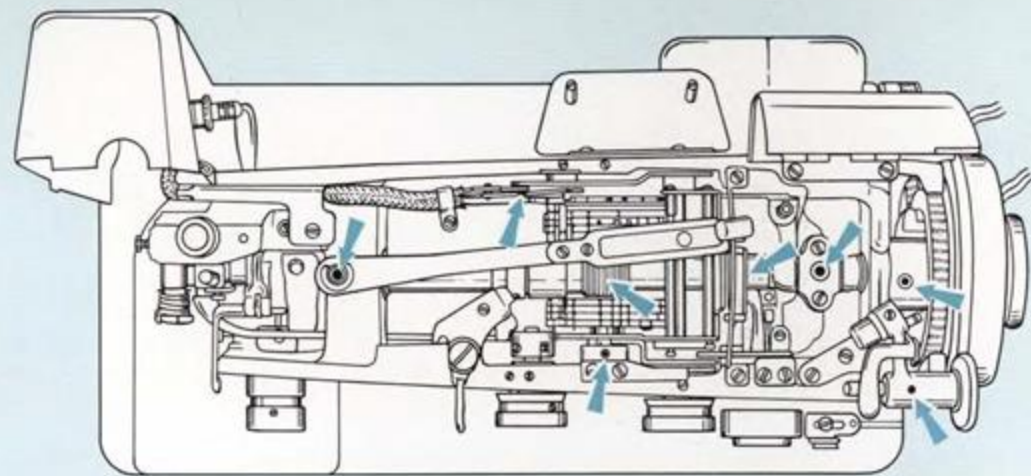
MAINTENANCE oiling

Correct and regular oiling is of **UTMOST IMPORTANCE**. Use only best quality sewing machine oil which is clear and thin. Thick, gummy oil will clog oil holes and cause machine to run hard. If machine is in continual use, oil every day; with moderate use, occasional oiling is sufficient. Place one drop of oil at each oiling point, indicated by arrows.

AVOID OVER-OILING as it may stain expensive materials.



1. Open face plate to reach oiling points back of face plate.



2. Lift arm cover and drop oil in holes in housing.

3. Tilt sewing head back to oil parts beneath.

motor belt

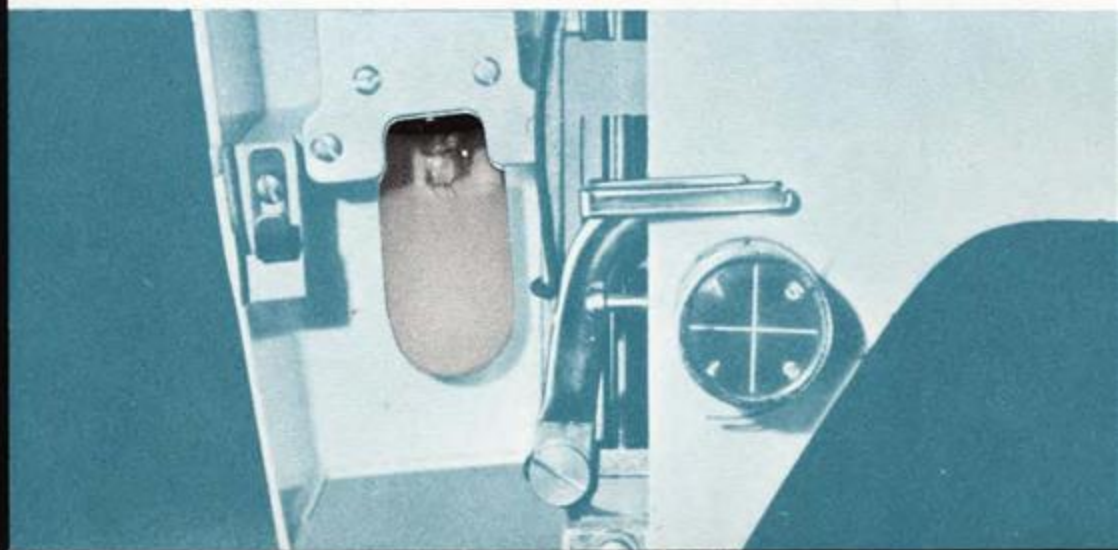
The motor belt may stretch from use. It should be tight enough to turn the hand wheel without slipping, but not so tight as to cause the machine to run heavily. Belt should run in a straight line from motor pulley to hand wheel.



TO TIGHTEN BELT, loosen hex-head motor bracket screw. Move bracket down slightly in slot and tighten screw.
TO ALIGN BELT, loosen set screw on motor pulley. Move pulley in or out on motor shaft until belt is properly aligned. Tighten set screw.

sewing light bulb

The sewing light is turned on and off by a switch on the back of the hinged face cover. The light bulb is inside the cover. To replace bulb, pull open the cover and turn bulb out of socket.



CAUTION: Before attempting to change the bulb, remove the service cord from the wall outlet.

cleaning the stitching mechanism

If lint and bits of thread accumulate under the needle plate, around the fabric feed, and in the shuttle race, this will interfere with the operation of the machine. Check occasionally and clean the stitching mechanism when necessary. Turn hand wheel toward you until needle reaches its highest position. Tilt sewing head back, and remove bobbin and bobbin case.

LATCH RETAINERS



SHUTTLE COVER



NOTCH PIN



NOTCH



HALF MOON



Open latch retainers by swinging out and down. Remove shuttle cover and half-moon piece. Thoroughly clean under fabric feed with a small brush; remove lint and dirt from parts of shuttle and wipe with a lightly oiled rag before replacing. Replace half-moon which lays loosely in position; replace the cover, making sure the notch pin fits in the notch. Lock in position by swinging up the retainers until they click. Replace the bobbin and case, and raise the head upright to sewing position.

NOTE: To reach all parts of stitching mechanism, remove needle plate and clean beneath with a soft brush.



HELPFUL HINTS

Your new Signature Sewing Machine was carefully inspected and tested at the factory and was in perfect working order when shipped. Under normal conditions, if you carefully follow instructions for threading, operating and maintenance, your machine will give you years of trouble-free service.

Occasional difficulties are usually caused by a condition that can be easily remedied with a minor adjustment. Some possible problems and their causes are given on the following pages. To correct, review instructions in this booklet for the pertinent subject.

HELPFUL HINTS

BOBBIN THREAD BREAKS

- Bobbin improperly inserted in case
- Bobbin case incorrectly inserted in machine
- Bobbin wound unevenly or too full
- Poor quality thread
- Stitch hole in needle plate rough or sharp
- Bobbin thread tension too tight

NOTE: If bobbin thread cannot be pulled up, needle may be improperly inserted.

NEEDLE BREAKS

- Incorrect needle length
- Needle bent
- Incorrect size needle or thread for material being sewn
- Presser foot or attachment not securely fastened to presser bar
- Pulling material while sewing.

NOTE: Do not move Stitch Width Regulator with needle in the material.

MACHINE DOES NOT FEED PROPERLY

- Stitch length regulator knob set below No. 1
- Presser foot not down completely
- Pressure on presser foot insufficient
- Sew-Darn Knob improperly adjusted

HELPFUL HINTS

MACHINE MAKES LOOSE STITCHES OR LOOPS

- Machine not properly threaded
- Presser foot not down completely
- Tension not adjusted properly
- Thread check-spring bent or broken
- Incorrect needle for size of thread, or too coarse for material
- Bobbin and needle thread not of the same size
- Needle point damaged

NEEDLE THREAD BREAKS

- Incorrect needle length
- Needle too fine for thread
- Needle bent or point damaged
- Needle inserted incorrectly, or improperly threaded
- Tension on needle thread too tight
- Poor quality or knotted thread
- Stitch hole in needle plate rough or sharp
- Needle rubbing against presser foot or attachment
- Starting machine at full speed

BOBBIN DOES NOT WIND PROPERLY

- Machine not threaded correctly for winding
- Thread guide discs not properly set
- Bobbin winder not touching hand wheel

HELPFUL HINTS

STITCHING PUCKERS MATERIAL

- Needle size not correct for size of thread
- Needle thread tension too tight
- Bobbin thread tension too tight
- Presser foot pressure too great
- Bobbin and upper spool thread not of the same size

MACHINE SKIPS STITCHES

- Incorrect needle length
- Bent or blunt needle
- Needle inserted incorrectly
- Needle incorrectly threaded
- Thread too heavy for needle
- Pressure on foot insufficient, especially when sewing heavy material.
- Bobbin not threaded correctly in bobbin case

LIGHT WILL NOT LIGHT

- Bulb burned out
- Light cord not plugged in "Light" socket in cabinet or case
- Light switch not turned on

HELPFUL HINTS

STITCHING MECHANISM JAMS

- Shuttle clogged with thread and lint
- Machine not threaded correctly
- Sewing beyond the end of material
- Stitch length regulator knob set below No. 1

MACHINE RUNS HEAVILY

- Machine needs oiling
- Lubricated with improper or gummy oil
- Motor belt too tight
- Bobbin winder not released—running on hand wheel
- Lint and threads packed in stitching mechanism
- Material too heavy to be sewn on this machine

MACHINE WILL NOT SEW

- Service cord not plugged into electrical outlet
- Motor cord not plugged in "Motor" socket in cabinet or case
- Stop motion knob not tightened
- Motor belt slipped off pulley or hand wheel
- Motor belt too loose or broken

SERVICE NATIONWIDE



how to obtain service

The merchandise you have purchased from us has been carefully engineered and manufactured under Wards rigid quality standards and should give you satisfactory and dependable operation. However, like all mechanical merchandise, it may occasionally require adjustment or maintenance.

Should you ever need technical assistance, please contact or write your nearest Wards Retail Store, Catalog Store or Mail Order House.

PROVIDE THE FOLLOWING:

1. Model, serial number and all of the other data shown on the nameplate which is mounted on the under side of the sewing head bedplate, at the front.
2. The date and the Wards branch from which you purchased your sewing machine.
3. State briefly the trouble you are having.

how to obtain replacement parts

Replacement Parts may be obtained from your Wards Retail Store, Catalog Store or Mail Order House and will be made available at current prices. If requested, prices will be quoted in advance.

When requesting replacement parts be sure to give the model and serial number as shown on the nameplate which is on the under side of the sewing head bed-plate, at the front.

If you order by mail, you will pay the transportation charges from the shipping point.















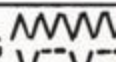






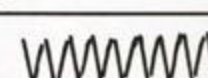


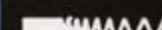




ATTACHMENTS, ACCESSORIES & REPLACEMENT PARTS

NAME OF PART	Part No.
Needles (Pkg. of 12 assorted sizes)	9270
Twin Needle	9282
Tension Spring	6123
Bobbin (Pkg. of 6)	9248
Bobbin case complete	7127B
Bobbin case tension spring	1554
Bobbin case tension spring screw	S551
Needle plate, hinged	7010A
Bobbin winder rubber ring	1352
Check spring (Thread take-up)	4060
Electric cord and block for Portable	SM107
Electric cord and block for Cabinet	SM109
Electric foot control for Portable	SM106
Electric knee control for Cabinet	SM110

NAME OF PART	Part No.
Motor V Belt	9292
Motor-Pulley for V Belt	228
Needle clamp and screw	7063
Presser foot—Zigzag	7165B
Presser foot for buttons	3901
Presser foot-for buttonholes	4193B
Darning Foot	4195
Hemmer Foot (Narrow Hemmer)	3907
Zipper and Cording Foot	4194
Binder	4196
Presser foot screw	S154
Sewing light bulb	9262
Spool pin	2330

EASY CONTROL GUIDE

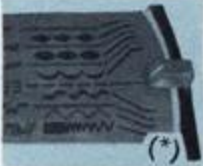





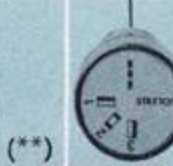






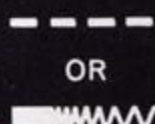







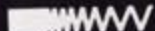


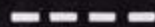


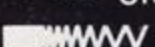

attachment, straight and special stitch sewing

									ATTACHMENT OR PRESSER FOOT
STRAIGHT STITCH 		Always set Twin Needle Lever at "1" except when sewing with twin needles. For Twin Needle sewing, set at "11".	SEW	2 - 8	To INCREASE upper thread tension, turn Tension Knob to a HIGHER Number; to DECREASE, turn to a LOWER number. After a satisfactory setting is established, it is seldom necessary to adjust Tension Knob. See detailed instructions on Page 19. For Machine Basting, set at "11".	$2\frac{1}{2}$	Buttonhole Maker Knob should always be in neutral position, except when making Buttonholes.		
BLIND STITCH HEMMING 			SEW	3 - 6		2 - 5			
OVERCASTING 	 OR 		SEW	4		3			
HEMSTITCHING 			SEW	3		2			
MACHINE BASTING 			SEW	8		$2\frac{1}{2}$			
ZIGZAG STITCH 			SEW	SEE CHART PAGE 27		SEE CHART PAGE 27			
SATIN STITCH 			SEW	$\frac{1}{4}$ - 1		1 - 5			
EMBROIDERY PATTERNS 			SEW	$\frac{1}{4}$ - 1		5 SEE PAGE 30			
TWIN NEEDLE SEWING	ANY POSITION		SEW	OPTIONAL 1 through 8		2 or SEE PAGE 31			
SEWING ON BUTTONS 			DARN	0		SET TO FIT HOLES IN BUTTON P.38			

*Before moving Pattern Selector Lever, turn Stitch Width Knob to "0". After setting Pattern Selector Lever, turn Stitch Width Knob to correct number for the operation.
 **Do not adjust Switch Width Knob or Buttonhole Maker Knob with needle in fabric. Turn hand wheel until needle is clear of fabric before making adjustment in setting.

EASY CONTROL GUIDE

attachment, straight and special stitch sewing

									ATTACHMENT OR PRESSER FOOT
BINDING 		OR	SEW	OPTIONAL 1 through 4	To INCREASE upper thread tension, turn Tension Knob to a HIGHER Number; to DECREASE, turn to a LOWER number. After a satisfactory setting is established, it is seldom necessary to adjust Tension Knob. See detailed instructions on Page 19. For Machine Basting, set at "1".	$2 \frac{1}{2}$			
NARROW HEMMING 		OR	SEW	OPTIONAL 2 through 5		2 — 3			
ZIPPER SEWING 			SEW	OPTIONAL 2 through 5		$2 \frac{1}{2}$			
QUILTING 			SEW	OPTIONAL 5 through 8		$2 \frac{1}{2}$			
BUTTON-HOLES (4 basic steps) <small>No need to turn fabric. Just turn button hole maker knob.</small>			SEW	WHITE ● DOT		5			
DARNING 			DARN	0		$2 \frac{1}{2}$			
FREE MOTION EMBROIDERY 		OR	DARN	0		$2 \frac{1}{2}$ or 0 — 5			

*Before moving Pattern Selector Lever, turn Stitch Width Knob to "0". After setting Pattern Selector Lever, turn Stitch Width Knob to correct number for the operation.

**Do not adjust Switch Width Knob or Buttonhole Maker Knob with needle in fabric. Turn hand wheel until needle is clear of fabric before making adjustment in setting.

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Signature zigzag sewing machine

20-YEAR PROTECTION PLAN

Wards will repair free, any Signature sewing machine part which fails, if returned within one year of purchase. For 19 more years Wards will furnish free replacements of casting and drive mechanism parts which fail, except the motor or belt, if returned to us, charging only for installation. Guarantee applies only to original owner with non-commercial use. Accident, damage or abuse is not covered.

Signature — SOLD EXCLUSIVELY BY **MONTGOMERY WARD**

82S-10B*